

WILDLAND FIRE MANAGEMENT PLAN

NEZ PERCE NATIONAL HISTORICAL PARK/
BIG HOLE NATIONAL BATTLEFIELD



December 2004

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Date

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I. INTRODUCTION**A. Reasons for Revision**

This plan revises and updates the 1999 Fire Management Plan (FMP) for Nez Perce National Historical Park and Big Hole National Battlefield (NEPE/BIHO) to meet all current National Park Service (NPS) regulations and guidelines. It implements an approved course of action that is consistent with the park enabling legislation and described in other park planning documents.

This FMP was written as an operational guide for managing NEPE/BIHO wildland and prescribed fire programs. This revision outlines in a detailed manner those actions that will be taken by NEPE/BIHO in meeting the fire management goals for the area. It defines levels of protection needed to ensure public safety, protect facilities and resources, and restore and perpetuate natural processes. It was written to comply with a NPS requirement that all parks with burnable vegetation develop a fire management plan and a fire management program reflecting local ecology (Director's Order #18, Wildland Fire Management, 08/10/01).

When approved, this document will be the 2004 revision and update of the FMP for NEPE/BIHO. Major components include:

- Current policy and intent for prescribed and wildland fires for Nez Perce National Historical Park and Big Hole National Battlefield including a 5-Year Action Plan.
- Sustained implementation of current Director's Order #18 Wildland Fire Management, USDI, NPS 08/10/01.
- Format changes to meet current guidelines of RM-18 "Wildland Fire Management", Chapter 4 (11-05-2002).
- Re-organization of Fire Management Units to better address park and regional fire management planning concerns.
- Reinforcement of the 1995 Federal Wildland Fire Management Policy and Review.

Wildland fire will be managed to prevent damage to the significant features and environs of NEPE/BIHO and neighboring lands. Prescribed fire may be used to reduce hazard fuels; restore natural ecosystem processes; reduce debris resulting from other Park management; maintain the historic practices and viewsheds; expose or reduce encroaching native and non-native vegetative species; and/or further the knowledge of fire effects on the ecosystem through research.

B. Summary of Collaborative Process Used to Develop This Plan

A number of meetings and individual visits were held with partnering agencies, representatives of the Nez Perce Tribe, and private landowners. Specifically, NEPE/BIHO has worked closely with the Beaverhead/Deer Lodge National Forest and the FMO for Glacier National Park in developing and implementing the prescribed fire portions of this plan. They have provided

valuable insight and information as individual burn plans were developed under the original FMP.

C. Implementation of Fire Management Policies

This FMP will implement fire management policies and help achieve resource management and fire management goals as defined in: 1) Federal Wildland Fire Management Policy and Program Review; 2) Managing Impacts of Wildfires on Communities and the Environment - A Cohesive Strategy (USDOI/USDA); and 3) A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan.

D. Compliance

This plan and supporting documents will continue to meet the requirements of the National Environmental Protection Act (NEPA), the Endangered Species Act, the Clean Water Act, and the National Historic Preservation Act (NHPA). An environmental assessment serves as the NEPA documentation for this plan and is summarized in Appendix C.

The 1999 Environmental Assessment for the NEPE/BIHO FMP implemented a course of action consistent with the Park's General Management Plan approved through a 1997 Environmental Impact Statement. Since there is no major policy or management action changes purposed through this revision, the NPS feels the original EA fully addressed the scope and purpose of all actions to be taken in this FMP.

E. Authorities for Implementation

Authority for carrying out a fire management program at NEPE/BIHO originates with the Organic Act of the National Park System, August 25, 1916. This Act states that the primary goal of the NPS is to preserve and protect the natural and cultural resources found on lands under its management in such manner as will leave them unimpaired for future generations.

The Management Authorities (Directors Order-18, November 1998 and Reference Manual (RM)-18, November 5, 2002 revision) are the guiding documents for fire management plan implementation. Service-wide fire management policy is expressed in the current revisions of the Directors Orders and attendant Reference Manual for the NPS, and "The Wildland and Prescribed Fire Management Policy: Implementation and Reference Guide" (1998), and is incorporated herein by reference.

II. RELATIONSHIP TO LAND MANAGEMENT POLICY

A. NPS Fire Management Policy

It is the policy of the National Park Service to allow natural processes to occur to the extent practical while meeting park unit management objectives. NPS Management Policies (1988) state that:

"Fire is a powerful phenomenon with the potential to drastically alter the vegetative cover of any park. The presence or absence of natural fires within a given ecosystem is recognized as a potent factor stimulating, retarding, or eliminating various components of the ecosystem. Most natural fires are lightning caused and are recognized as natural phenomenon which must be permitted to continue to influence the ecosystem if truly natural systems are to be perpetuated. Fire may contribute to or hinder the achievement of park objectives. Park fire management programs will be designed around resource management objectives and the various management zones of the park".

NPS fire management policy is detailed in RM-18, "Wildland and Prescribed Fire Management Policy" (NPS 2002) and DO-18, "Wildland Fire Management" (NPS 1998). The NPS has taken a lead role in considering fire as a fundamental force in perpetuating natural ecosystems, as stated in Director's Order #18:

"All wildfires may be managed to accomplish resource management goals providing they do not compromise firefighter and public safety."

The Department of Interior Manual, DM 910 (USDI 1997) states the following regarding wildland fires:

"Wildfires may result in loss of life, have detrimental impacts upon natural resources, and damage to or destruction of man-made developments. However, the use of fire under carefully defined conditions is to be a valuable tool in wildland management. Therefore, all wildfires within the Department will be classified either as wildfire or as prescribed fires. Wildfires, whether on lands administered by the Department or adjacent thereto, which threaten life, man-made structures, or are determined to be a threat to the natural resources or the facilities under the Department's jurisdiction, will be considered emergencies and their suppression given priority over normal Departmental programs.

Bureaus will give the highest priority to preventing the disaster fire - the situation in which a wildfire causes damage of such magnitude as to impact management objectives and/or socio-economic conditions of an area. However, no wildfire situation, with the possible exception of threat to human survival, requires the exposure of firefighters to life threatening situations. Within the framework of management objective and plans, overall wildfire damage will be held to the minimum possible, giving full consideration to (1) an aggressive fire prevention program; (2) the least expenditure of public funds for effective suppression; (3) the methods of suppression least damaging to resources and the environment; and (4) the integration of cooperative suppression actions by agencies of the Department among themselves or with other qualified suppression organizations.

Prescribed fires . . . may be used to achieve agency land or resource management objectives as defined in the fire management plans. Prescribed fires will be conducted only when the following conditions are met:

- a. Conducted by qualified personnel under written prescriptions.*
- b. Monitored to assure they remain within prescription.*

Prescribed fires that exceed the limits of an approved prescribed fire plan will be reclassified as a wildfire. Once classified a wildfire, the fire will be suppressed and will not be returned to prescribed fire status.”

Specific guidelines and their reference include:

1. Authority for NPS fire management is found in 16 USC Sec. 1-4 (August 25, 1916), which states that the agency's purpose regarding fire management:

“ . . . is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

This authority was clarified in the National Parks and Recreation Act of 1978:

“Congress declares that . . . these areas, though distinct in character, are united . . . into one national park system. . . . The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress.”

2. The authority for FIREPRO funding (Normal Fire Year Programming) and all emergency fire accounts is found in the following legislation:

Section 102 of the General Provisions of the Department of Interior’s annual Appropriations Bill provides the authority under which appropriated monies can be expended or transferred to fund expenditures arising from the emergency prevention and suppression of wildland fire.

P.L. 101-121, Department of the Interior and Related Agencies Appropriation Act of 1990, established the funding mechanism for normal year expenditures of funds for fire management purposes.

31 US Code 665(E)(1)(B) provides the authority to exceed appropriations due to wildland fire management activities involving the safety of human life and protection of property.

3. Procurement/Administrative Activities

Authority for procurement and administrative activities necessary to support wildland fire suppression missions are contained in the Interagency Fire Business Management Handbook.

4. Cooperative Agreements

Authority to enter into agreements with other Federal bureaus and agencies; with state, county, and municipal governments; and with private companies, groups, corporations, and individuals are cited in NPS-20 (Federal Assistance and Interagency Agreements). These include the Reciprocal Fire Protection Act of May 27, 1955 (42 USC 815a; 69Stat 66).

Authority for interagency agreements is found in “Interagency Agreement between the Bureau of Land Management, Bureau of Indian Affairs, National Park Service, US Fish and Wildlife Service of the United States Department of the Interior, and the Forest Service of the United States Department of Agriculture, State of Oregon and the State of Washington (1998),” and Reference Manual -18 (Chapter 5, section 1) 02/10/01.

Authority for rendering emergency fire or rescue assistance outside the National Park System is established in the Act of August 8, 1953 (16 USC 1b(1)) and the Departmental Manual (910 DM).

5. Fire Management Activities

Authorities for implementing this plan are identified in RM-18.

B. Enabling Legislation and Description of NEPE/BIHO

1. Why the Park Was Established

Nez Perce National Historical Park was established as a unit of the National Park Service on May 15, 1965, by Public Law 89-19. The law specified that the park is to “*facilitate protection and provide interpretation of sites in the Nez Perce Country of Idaho that have exceptional value in commemorating the history of the Nation.*” A total of 24 sites were initially established through the 1965 legislation.

Public Law 102-576 of October 30, 1992, designated 14 additional sites in Oregon, Washington, Montana, and Wyoming for inclusion in Nez Perce National Historical Park. The newly expanded 38 unit park allowed for the integration of Big Hole National Battlefield into Nez Perce National Historical Park. Big Hole was initially reserved as Big Hole National Monument in 1910 and administered by the War Department and then the U.S. Forest Service. The site was later transferred to the National Park Service in 1933 where it underwent various operational and management changes until becoming a unit of Nez Perce National Historical Park in 1992.

On the basis of provisions in the enabling legislation, some of the purposes of NEPE/BIHO are to:

“facilitate protection and offer interpretation of the Nez Perce sites in Idaho, Oregon, Washington, Montana, and Wyoming that have exceptional value in commemorating the history of the United States”

“preserve and protect tangible resources that document the history of the Nez Perce peoples and the significant role of the Nez Perce in North American history.”

The land base managed directly by NEPE/BIHO is at present 2,428 acres in size, being contained in the sites of Big Hole National Battlefield, Buffalo Eddy, Canoe Camp, East Kamiah, Old Joseph Cemetery, Spalding, Weippe Prairie, and the White Bird Battlefield. In order to comply with the enabling legislative language, “...*in research into and interpretation of the significance of any site so designated and in providing desirable interpretive services and facilities and other facilities required for public access to and use and enjoyment of the site and in conservation of the scenic and other resources thereof*”, fire can be utilized as a management tool.

2. Significant Resources and Values of NEPE/BIHO

NEPE/BIHO sites are mostly small pockets of land owned and surrounded by a patchwork of private, local, state, tribal, and other federal ownership. National Park Service administered sites fall into three basic ecoregions. These are the Shortgrass Prairies of the Palouse Grasslands and Missouri Basin, the Sagebrush Steppe of the Columbia and Snake River Plateaus, and the Mixed Conifer of the Blue Mountains, Salmon River Mountains, basins and ranges of southwestern Montana, and the northern Rocky Mountains of Idaho and Montana (Bailey 1995).

a. Shortgrass Prairie

Shortgrass prairies are characterized by flat or rolling expanses of low to moderate relief. Park elevations range from less than 1,000 feet to about 3,500 feet. These prairies are dissected by rivers and streams forming canyons and valleys. In the eastern Washington and western Idaho areas of the Palouse Grassland, these prairies are windblown loess (soil) deposited on basalt tablelands. Park sites of the Palouse Grasslands for which the NPS has management authority include Buffalo Eddy, Canoe Camp, East Kamiah, Spalding, Weippe Prairie, and White Bird Battlefield. Because all these areas lie in the rain shadows of the Cascade Mountains they are in a semiarid regime. Precipitation averages less than 15 inches per year and is generally received during the winter season

The relatively dry nature of these sites results in the vegetative composition being dominated by shortgrass species such as wheatgrass, fescue, bluegrass, and sage. Wildflower species bloom in spring and summer, many of these such as the camas lily were widely utilized by the native inhabitants of the region as a food, medicine, and fiber sources.

The region supports an abundance of wildlife. Bald eagles are frequent visitors to the reaches of the Columbia, Snake, and Clearwater Rivers. Osprey, red-tailed hawk, and other raptors are common, as well as a wide variety of migratory and resident bird life. Cottontail rabbits, ground squirrels, coyotes, bobcats, and skunks abound in these grasslands, as well. Severe winters frequently force elk and mule deer from higher elevations to these plateaus and river bottoms.

b. Sagebrush Steppe

Sagebrush steppe is characterized by the plains and tablelands of the Columbia and Snake River Plateaus. These mid-elevation (3,000 feet) plateaus include most of the

Northwest's lava fields and are surrounded by lava flows that have been folded or faulted into ridges. Many of the soils in these areas consist of alluvial deposits in stream floodplains and windblown sand and loess. Park sites of the sagebrush steppe include Dug Bar, Buffalo Eddy, Camas Meadows, Nez Perce Cemetery, and Nez Perce Campsites.

The climate on these plateaus is again semiarid and cool. Average annual precipitation is about 16 inches with precipitation distributed fairly evenly from fall to spring.

The predominant vegetation is a variation of sagebrush, shadscale, and short grasses. Stream channels may support a lush understory of willow and other riparian obligates, but will rapidly graduate to more arid and alkali tolerant species such as greasewood, particularly when moving away from mountains.

Many wildlife species utilize these areas as seasonal habitat, particularly during the winter months. Larger mammals of these areas include coyote, pronghorn antelope, mountain lion, and bobcat. Smaller species include ground squirrels, deer mouse, and porcupine. Severe winters may force elk and mule deer from higher elevations to these plateaus. The geography of this area supports habitat that is important for many species of migratory waterfowl. Species such as mallard, green-winged teal, pintail, and Canada geese utilize the area for breeding and resting. Other birds include bald eagles, Swainson's hawk, ferruginous hawk, prairie falcon, great horned owl, burrowing owl, killdeer, and western kingbird. Reptiles include sagebrush lizard, horned lizard, and rattlesnakes.

b. Mixed Conifer

The majority of the mountains in Central Idaho were formed by granitic intrusions forcing the local terrain upwards to elevations of from 3,000 to 7,000 feet. The entire area, called the Idaho Batholith, is deeply dissected, exposing the granite core over vast areas and creating local relief of greater than 3,000 feet in many areas. To the east of the batholith is an area of linear valleys bordered by mountain ranges (basin-and-ranges). Big Hole National Battlefield is situated on the west flank of a basin-and-range. To the west of the batholith are the Blue Mountains. These generally do not exceed 8,000 feet elevation. Soils are relatively shallow, formed from a variety of igneous, sedimentary, and metamorphic rocks. The shallowness of the soils does not play a major role in determining forest distribution. Additional soils have been deposited on the foothills from loess and volcanic ash. The Snake River cuts a channel between the batholith and the Blue Mountains, which is deeper than the Grand Canyon. Many of the higher elevations in this area have been glaciated. Park sites of the conifer/alpine meadows include Old Joseph Cemetery and Big Hole National Battlefield.

Severe winters in the higher elevations are usual. The temperature during the winter may frequently drop below 32 F, and the highs during the summer may only reach 70 F.

Temperature and snowfall vary greatly with elevation. Precipitation averages between 20-40 inches per year and comes predominantly in snowfall during the winter months.

These ranges are marked with distinctive elevation zones of vegetation. In the Idaho Batholith and the Blue Mountains, Douglas-fir is the climax dominant conifer below the subalpine zone. Lodge pole pine and grasses are dominant in the basin-and-ranges. Ponderosa pine is scattered below these areas and dominates west of the continental divide. The lower mountain slopes of all these areas may graduate from conifer to sagebrush and grass steppe lands.

Some of the larger mammals include elk, deer, moose, black bear, mountain lion, bobcat, beaver, and porcupine. Small mammals include flying squirrel, marten, chipmunks, and wood rats. Bird species include mountain bluebird, red-breasted nuthatch, ruby-crowned kinglet, pygmy nuthatch, Stellar's jay, and Clark's Nutcracker. A wide variety of migratory birds, including bald eagles, peregrine falcons, and sandhill cranes, utilize an assortment of habitats, but riparian areas see the greatest numbers. Hawks and owls can be seen in most of the region.

c. Endangered, Threatened, or Sensitive Species

Plant and animal communities in the park have been impacted by man's activities over time, including livestock grazing, timber harvest, mining, pest control projects, water diversions, road construction, and fire suppression. Relic areas, where plant communities have not been disturbed by human activities, may be present in some locations of the park. The two listed threatened plant species have potential to be located within NEPE/BIHO sites include the Spalding Catchfly (*Silene spaldingii*) and the Ute Ladies' Tresses (*Spiranthes diluvialis*).

Much of the Snake and Clearwater rivers and many of their tributaries have been declared as critical habitat for the Bull Trout (*Salvelinus confluentus*) and the Snake River fall Chinook salmon (*Oncorhynchus tshawytscha*) federally listed threatened species. In addition, the entire Snake River Basin has been designated as an Evolutionary Significant Unit for the West Coast steelhead (*Oncorhynchus mykiss*). Several park sites lie adjacent to these rivers and their tributaries.

Gray wolf (*Canis lupus*), Grizzly Bear (*Ursus arctos horribilis*), Canada Lynx (*Lynx canadensis*), and Bald Eagle (*Haliaeetus leucocephalus*) are federally listed threatened species and may occasionally be seen in the park, but are not residents. Candidate species that may also exist in the park include the Montana arctic grayling (*Thymallus arcticus montanus*).

d. Cultural Resources

By the very nature of the park, each site included in NEPE/BIHO exhibits a central cultural or historical resource of importance. When sites were added to the park in 1965 and again during the 1992 additions, each site was chosen for having “exceptional value

in commemorating the history of the Nation.” Specifically mentioned are sites relating to early Nez Perce culture, the Lewis and Clark expedition, the fur trade, missionaries, gold mining and logging, the Nez Perce War of 1877, and “such other sites as will depict the role of Nez Perce country in the westward expansion of the Nation.”

All sites included in Nez Perce NHP, unless they have been determined to “not contribute,” are eligible for inclusion in the National Register of Historic Places under the Nez Perce National Historical Park multi-property National Register listing. Many of the units of NEPE/BIHO include sites containing a complex mixture of significant historic buildings, battlefields, archaeological resources, earth and rock works, cemeteries, sacred sites, monuments, cultural landscapes, and traditional cultural properties of great importance to the Nez Perce people. A complete list of cultural resources and their current status and condition is available in NEPE/BIHO resource management files.

C. General Management Plan Fire Related Objectives

The GMP for NEPE/BIHO includes several general items that have relevance and provide direction for the FMP including the following:

- *“There is a desire to get rid of exotic species and noxious weeds, returning the land to native or historic vegetation” (page 13).*
- *“There is encouragement to preserve the aesthetic qualities and the historic scene and character, to avoid encroachment, and to keep sites natural and open” (page 13).*
- *“The Park Service will work will cooperate with others to preserve the setting and the wildlife corridor” (page 63).*
- *“The Park Service will continue strong ties with the Forest Service” (page 71).*
- *“The Historic scene will be retained, and the viewshed north and south of the site will be preserved” (page 71).*

The GMP is scheduled for minor revisions (2005-2006) by Park staff. Upon completion of the GMP, there may be a need to revise and coordinate this FMP document.

D. Resource Management Plan Fire Related Objectives

The 1999 RMP for NEPE/BIHO delineates the park's objectives for management of natural and cultural resources and records accomplishments toward meeting those objectives. It outlines strategies to address resource problems and data deficiencies as stated in the objectives. The following objectives and items have relevance to the FMP:

- *“In areas designated as natural zones, maintain or restore a semblance of indigenous flora and fauna and natural communities to achieve species diversity and community structure which approximates that which would have been created by natural events and processes” (page 11).*

- *“At Big Hole, the exclusion of the natural fire regime appears to have altered forest succession” (page 42).*
- *“Some research has been done in an attempt to describe the scene as it looked in 1877...prescribed fire was also used...in the restoration of the natural system” (page 43).*
- *“The use of prescribed fire will continue to be an active part of vegetation management at selected park sites. Many of the species that were endemic to park sites depend on the natural effects of fire to assist them in maintaining plant vigor, natural composition, and in maintaining a dominant edge over exotic and noxious species” (page 60).*

E. Meeting the GMP and RMP Objectives

This FMP for NEPE/BIHO has been designed to implement Departmental and Park-specific fire management policies and objectives. It is a detailed plan of action to develop a fire management program based on safety and resource objectives. Although the GMP does not specifically direct the park to manage fire, natural resource objectives noted throughout the document can be accomplished through an effective fire management program. Fire is a natural ecological process and implementation of this FMP will assist NEPE/BIHO in achieving those resource based objectives and goals described throughout park documents. By approximating a more natural fire regime plant and wildlife habitat can be enhanced, noxious weeds and exotic species controlled, cultural landscapes and historic viewsheds can be maintained and enhanced.

III. WILDLAND FIRE MANAGEMENT STRATEGIES

A. General Management Considerations

The overall objectives for NEPE/BIHO fire management are to promote a program aimed at reducing human-caused fires, to ensure appropriate suppression response capability to meet expected wildland fire complexity and to introduce the use of management-ignited prescribed fire for restoration of fire-dependent ecosystems and species-specific resource management goals.

Most NEPE/BIHO park sites are relatively small in size (the largest site is the White Bird Battlefield of 1,240 acres) and surrounded by a host of private, state, federal, or tribally owned properties. This fractional landownership and the wildland urban interface areas present at many sites require a collaborative approach to wildland fire management. Partnerships with the Nez Perce Tribe, the Idaho Department of Lands, the Beaverhead/Deer Lodge National Forest, Glacier National Park, and the Wallowa-Whitman National Forest have been developed for fire suppression activities on different NEPE/BIHO park sites. Due to the NEPE/BIHO lack of fire staff, these partnerships are vital and may result in involvement of resources from additional surrounding national forests and private contractors as the need arises.

Wildland fire use for resource benefits has been considered for NEPE/BIHO, but due to the small size of most park sites and presence of surrounding private, state, federal, and tribally owned lands, it was not approved as a program element.

B. Wildland Fire Management Goals

The specific wildland fire management goals listed here will each contribute to the accomplishment of regional and national strategic plans including the 10-year Comprehensive Strategy and the NPS Strategic Plan, as well as federal fire policy. The specific goal from the NPS Strategic Plan is:

Mission Goal Ia: Natural and Cultural Resources and Associated Values Are Protected, Restored, and Maintained In Good Condition and Managed Within Their Broader Ecosystem and Cultural Context.

Park-specific wildland fire management goals and related objectives are included below:

Goal 1: Make firefighter and public safety the highest priority of every fire management activity.

Objective: Ensure all wildland fire operations sustain no injuries to members of the public or firefighters.

Strategies:

- All personnel involved in fire management operations will receive a safety briefing describing known hazards and mitigating actions, current fire season conditions, and current and predicted fire weather and behavior.
- Fire management operations will be carried out by qualified individuals that promote the safe and skillful application of fire management strategies and techniques.
- NEPE/BIHO neighbors, visitors, and local residents will be notified of all planned and unplanned fire management activities that have the potential to impact them.
- All or portions of NEPE/BIHO will closed to the public when fire activity poses a threat to human safety (at the discretion of the Superintendent).

Goal 2: Promote a fire management program and aggressively control all unplanned wildland fires at costs commensurate with resource values at risk.

Objective: Prevent fire spread onto adjacent public and private lands by working to contain all fires as quickly as possible within the individual park site boundaries.

Strategies:

- Prioritize suppression actions on fires or portions of fires that threaten to damage adjacent public, private, or tribal property.
- Investigate human-caused fires and take appropriate enforcement actions.

- Complete and participate in annual and regular preparedness reviews to assure program readiness.
- Implement and maintain an effective fire prevention program that eliminates human-caused fires and minimizes threats to life and property.

Goal 3: Manage wildland fires so that NEPE/BIHO natural and cultural resources are protected from damage by suppression and fire.

Objective: Attempt to manage suppression actions so that rehabilitation costs are minimized.

Strategies:

- Ensure wildland fire suppression operations employ Minimum Impact Suppression Tactics (MIST).
- Ensure all fire operations personnel are thoroughly briefed on NEPE/BIHO resources and their potential from damage from fire and suppression actions.
- Ensure park staff members are assigned as resource advisor(s) to wildland fires within NEPE/BIHO (where and when available).
- Ensure adequate review by all disciplines within NEPE/BIHO, by park neighbors, by park partners, and by the public so that decisions made by the program manager are scientifically sound and socially defensible.

Goal 4: Facilitate fire management activities through the development and maintenance of cooperative agreements and working relationships with cooperator fire management entities with interest in NEPE/BIHO sites.

Objective: Annually (or as needed) review and modify as necessary agreements with cooperating agencies and participate in annual meetings between cooperators as necessary.

Strategies:

- Ensure all cooperative agreement and working relationships are current and operational.
- Share information and resources whenever possible to facilitate and further cooperative agreements.
- Educate employees and the public about the scope and effect of wildland fire management and fire's role in ecosystem management.

Goal 5: Employ prescribed fire as a program tool to meet resource management objectives and to maintain and restore natural ecological conditions where possible.

Objective: Use of prescribed fire to maintain cultural landscapes, reduce excessive natural and man-caused fuel loading, control exotic plants, and improve wildlife habitat.

Strategies:

- Restore the natural processes of fire to NEPE/BIHO park sites to further management goals.

- Maintain cooperative agreements with neighboring agencies and groups to aid in the development and implementation of prescribed burn goals.
- Quantify fire behavior and resultant fire effects through research, monitoring, and evaluation to better understand fire's role in shaping and maintaining ecological communities and to aid in refinement of fire prescriptions to meet specific objectives.

Goal 6: Reduce wildfire hazards around developed areas and adjacent to cultural and historic sites.

Objective: Ensure protection of administrative structures, cultural resources, and historic sites from wildland fires.

Strategies:

- Apply mechanized hazard fuel reduction and prescribed fire around those cultural and historic sites vulnerable to unwanted wildland fire.
- Utilize mechanized hazard fuel reduction and/or prescribed fire within and adjacent to suppression zones to reduce potential fire intensity and severity to lesser levels.

C. Wildland Fire Management Options.

1. Wildland Fire Suppression

In accordance with NPS-18, wildland fires will be suppressed “in a prompt, safe, aggressive, and cost-effective manner to produce fast, efficient action with minimum damage to resources.” Suppression involves a range of possible actions from initial attack to final suppression. All fires not management-ignited will be considered wildland fires and will be suppressed.

Critical protection areas, such as known cultural sites, historic structures, facilities, and private residences near boundaries will receive priority consideration in fire control planning efforts. In all cases, the primary concern of fire suppression personnel shall be human safety. If necessary, individuals not involved in the suppression effort may be evacuated. MIST strategies (blacklines, burnouts, water drops) will be employed whenever possible to protect all resources. Natural and man-made barriers (roads, trails, etc.) are usually available as anchor points and may also be utilized with or without improvements as indirect fire lines. Only as a last recourse will fire line construction be conducted and only in such a way as to minimize long-term impacts to NEPE/BIHO resources. Construction of fire lines must be approved in advance by the Superintendent or Incident Commander.

Heavy equipment such as crawlers, tractors, dozers, or graders will not be used in NEPE/BIHO sites unless their use is absolutely necessary to prevent a fire from destroying private and/or government buildings and historic resources. The use of any heavy equipment requires prior approval from the Superintendent.

Sites impacted by fire suppression activities or by a wildfire will be rehabilitated as necessary, based on a course of action for each incident that has been reviewed and approved by the park Superintendent.

2. Prescribed Fires

The goals of management ignited prescribed fire in the park are to perpetuate the natural role of fire in the ecosystem under managed conditions, to reduce hazard fuel accumulations, and to aid in the maintenance of cultural landscapes as stated in approved park management documents. Specific management needs for the park as a whole and for specific areas will be determined annually. The park's ecosystems are dynamic and ecosystem responses to management actions must be monitored to determine additional management needs. Specific burn objectives, fire frequency rotation, firing methodology, and prescriptions will vary from year to year.

All prescribed fire projects will have a burn plan approved by the Superintendent. Each burn plan will be prepared using a systematic decision-making process, and contain measurable objectives, predetermined prescriptions, and be represented by an approved environmental compliance document. An Environmental Assessment was completed for the initial Fire Management Plan in 1999. Therefore, additional environmental analyses will be necessary only for fire related alternatives not outlined in this FMP. All burn plans will address the need for communication with neighbors and appropriate public officials during the time of and planning for the burn. An interdisciplinary approach will be used in all fire planning efforts, with full review by partners, neighbors, interest groups, and the public, to ensure that all aspects of environmental compliance including NEPA, the ESA, NHPA, among others are satisfactorily met. All prescribed fires will comply with applicable federal, state, and local air quality laws and regulations as well.

Ecological and fire behavior monitoring will be used to evaluate the degree to which burn objectives are accomplished. Long-term monitoring is required to document that overall programmatic objectives are being met and undesired effects are not occurring. Evaluation of fire effects data will be the joint responsibility of fire management and natural resources management personnel.

3. Wildland Fire Use

Wildland fire use will not be utilized at NEPE/BIHO sites due to staff limitations, the relatively small size and shape of the scattered units, and the fact that wildland fires managed under a fire use strategy would have a high probability of exiting the parks and threatening resources on adjacent lands. All wildland fires will be suppressed using the appropriate suppression response.

4. Non-Fire Applications

Mechanical fuels treatment may be utilized at several NEPE/BIHO sites in areas with dense or overgrown vegetation near structures and/or visitor use areas. There may also be a need to mechanically thin lodge pole pine and aspen stands at BIHO to assist in maintaining the cultural landscape. These treatments would typically occur 1 to 5 years before an accompanying

prescribed burn to allow for fine fuel buildups and drying of the down material before the next prescribed burn.

Mechanical treatment would consist of using chainsaws to selectively fall designated trees or patches of trees in a stand. Stand prescriptions will be developed that emulate natural conditions for the site. Overgrown and dense stands of grass or brush located in and among historic structures and other facilities would be removed with hand operated brush saws and grass cutters, or tractor mounted mowers. Cut materials would be gathered up by hand or with a tractor mounted rake for drying and later burning or other means of disposal.

D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU)

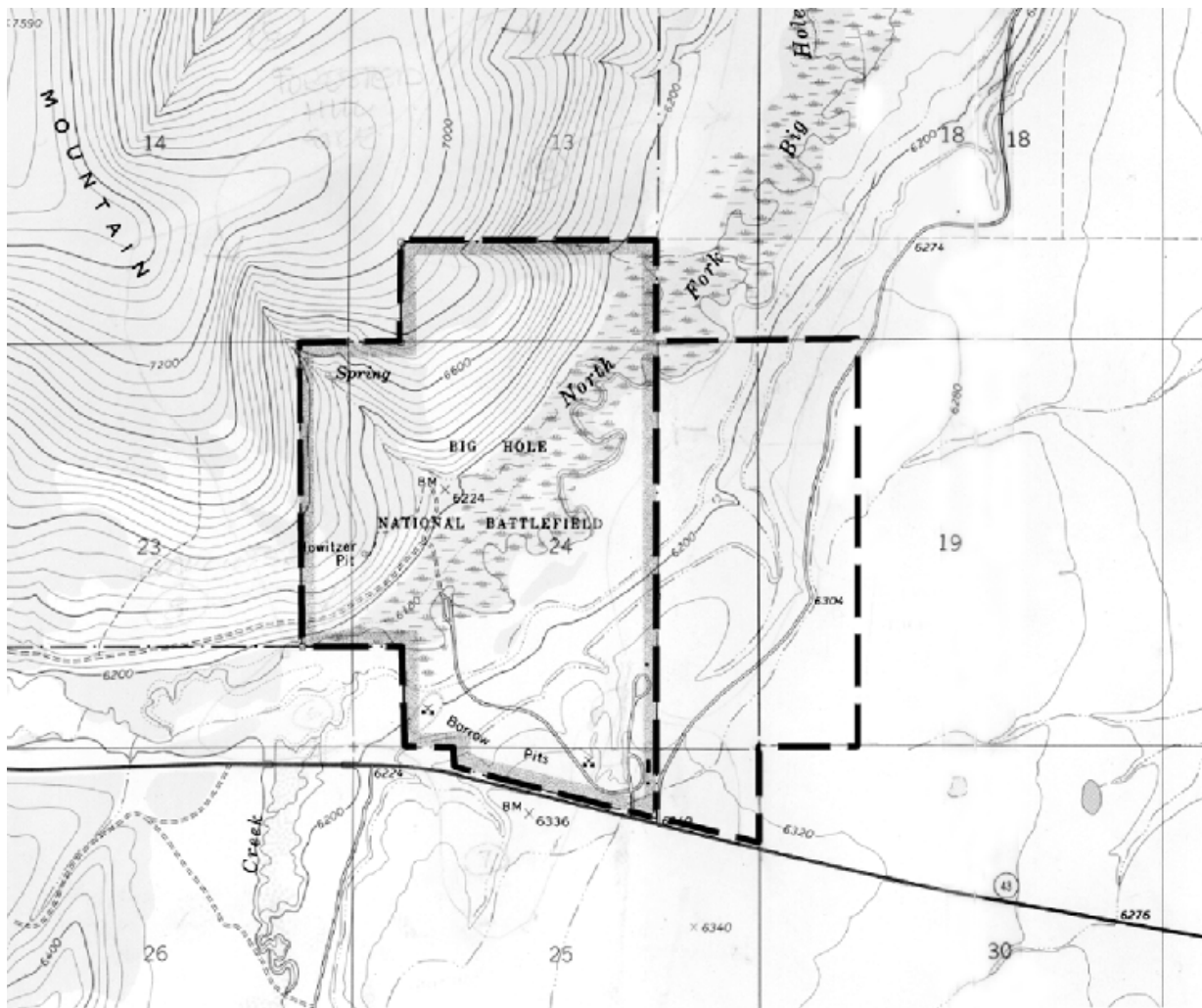
Three fire management units have been established for NEPE/BIHO consisting of the eight land parcels directly managed by the park having fuels capable of carrying wildland fire. This is a slight departure from the original 1999 FMP where each of the eight NPS owned and administered sites were described as individual FMU's. In their current configuration, the newly defined FMU's are no longer based entirely upon specific property boundaries representing a single land unit, but rather they may contain multiple small NEPE/BIHO park sites exhibiting similar ecological conditions, similar fuel types, values-to-be-protected, and/or management scenarios. The three FMU's described here are also reflective of the overall park administrative management organization created through the development of the Park's GMP in 1997 (see the 1997 Environmental Impact Statement for the Nez Perce National Historical Park GMP for additional details). This organization established three park "units" known as the Montana Unit, the Idaho Unit, and the Oregon/Washington Unit. Each of these would have a "Unit Manager" with responsibility for overseeing day-to-day operational issues within each unit.

The reduction in FMU's proposed here also allows for better integration of this FMP and individual NEPE/BIHO FMU's into the larger regional FMU development strategy currently underway with multi-agency Fire Planning Unit process.

The following is a unit-by-unit description of each of the NEPE/BIHO park FMU's. The discussion includes vegetation, soils, access, and any prescribed burn units present within the FMU. Each FMU is unique and has associated characteristics and problems that distinguish it from the other units across the park.

1. Montana Fire Management Unit

There currently only one Park site (Big Hole National Battlefield) constitutes the Montana FMU. The Big Hole National Battlefield is significant for its association with the Nez Perce War of 1877. The Nez Perce were camped along the North Fork of the Big Hole River when in the early morning hours they were attacked and overrun by Col. John Gibbon's troops. The 655 acre site is owned and administrated by the NPS and contains three prescribed burn units: 1) bench lands; 2) riparian; and 3) forest.



a. Physical and Biotic Characteristics

Vegetation varies from montane forest on the hillsides, to willow riparian and grassy areas along the North Fork of the Big Hole River, to grass/sagebrush bench lands around the visitor center and park housing areas. A montane forest administered by the U.S. Forest Service borders the unit on the west/northwest with privately owned hay and grazing ground on the north, east, and south.

The soils in the upland areas of the site are relatively shallow, being formed from a variety of igneous, sedimentary, and metamorphic rocks. The shallowness of the soils does not seem to play a major role in determining forest distribution. Additional soils present on the foothills surrounding the site are volcanic ash influenced loess deposits. The dominant soils of the lower riparian areas of the site are the deep and well drained. (Soil survey not available)

Though no listed threatened or endangered species have been specifically identified at BIHO, the following federally listed and candidate species may be present in Beaverhead County, Montana: Gray wolf (*Canis lupus*), Grizzly Bear (*Ursus arctos horribilis*), Canada Lynx (*Lynx canadensis*), Bald Eagle (*Haliaeetus leucocephalus*), and arctic grayling (*Thymallus arcticus montanus*).

The North Fork of the Big Hole River runs through the center part of the FMU which is bordered by a dense growth of willow riparian vegetation. Present across the entire site are significant archaeological resources. These resources include remains from the 1877 battle as well as post-battle historic resources associated with homesteading, ranching, mining, and early administration of the site by the U.S. Forest Service.

The upper bench area of the site includes a visitor center/exhibit room. Included in this structure are staff offices and a maintenance shop/storage area. Located 500 meters south of the visitor center is the employee housing complex. This area contains eight different single family homes and apartments. In addition, one of the employee houses is currently being utilized as an additional maintenance office and storage area.

b. Fire Management Objectives

Below are the three Fire Management Objectives that are consistent across all NEPE/BIHO Fire Management Units, followed by those specific to the Montana FMU:

- Wildland fires are controlled during initial attack (48 hours or 100 acres).
- One-hundred percent of all prescribed burns and mechanical treatments will be conducted consistent with Federal, State, and local laws and monitoring of project results and ecological effects will occur to document the success of the program.
- Assist with the establishment and maintenance of the historic scene.

The fire management objectives developed for the Montana FMU are described below:

- Reduce sagebrush encroachment along the bench and side hill slope areas.
- Manage vegetation to increase grass and forb stand components along the bench and side hill slope area.
- Reduce willow encroachment in the riparian areas along the Big Hole River.
- Manage vegetation to allow for wildlife movement into and through stand.
- Reduce forest fuel loading in the forested areas of the site.
- Manage vegetation to maintain forest stand integrity.
- Reduce woody vegetation along irrigation canals to restore historic scene and reduce water loss.

c. Management Considerations

- All wildland fires will be suppressed using an appropriate management response.
- Personnel and public safety are the highest priority for all fire management activities.

- Employ MIST strategies (reference Interagency Stands for Fire and Fire Operations and Appendix D).
- NEPE/BIHO neighbors, park partners, park visitors, and local residents will be notified of all planned and unplanned fire management activities having the potential to impact them.
- Park closures will be implemented at the discretion of the Superintendent.
- Ensure that no unacceptable impacts occur to cultural resources or T&E species.
- Ensure that air quality requirements are considered in developing implementation plans.
- Ensure socio-political economic impacts are considered in developing implementation plans.

d. Fire History

Several fire history studies have been conducted for forested areas in or near the Big Hole site and some grassland fire history can also be gleaned from some of these. Both dendrochronological methods and repeat photography methods were used. Dendrochronological methods involve counting tree rings and fire scars on cross sections of living trees. In each study (Stockes and Dieterich 1980, Arno 1976, Pierce 1982) the same general story unfolds. Prior to about 1900, fire played a major role in the area with fires occurring every 34 to 37 years in forested areas. These were small surface fires of light intensity and short duration. A fire scarred tree on the Big Hole Battlefield bench land steppe shows the mean fire interval during a portion of the 1700's was eight years, which might indicate that fires were deliberately set by American Indians (Barrett 1981, Pierce 1982).

After the 1900's the activities of man interrupted the natural fire interval and patterns of burning. Livestock grazing reduced the light fuels that had historically carried fires in the forests and interspersed meadows. Even though efforts to control naturally caused fires began about 1906, the frequency of fires and the area burned decreased due to the animal consumption of perennial grasses which provided flash fuels.

After about 1906 when the Forest Service began management of the site, active fire suppression began in earnest. A full fire suppression policy has continued to the present under the management of the NPS. Fire no longer plays the ecological role it once did in the forests or grass areas of site.

e. Specifics of Wildland Fire Management

1. Historical Weather Info

Table 1. Historical Weather Information for Big Hole National Battlefield

Big Hole National Battlefield Monthly Climate Summary (data from Wisdom, Montana weather station) Period of Record 1948 to 2004
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	May	June	July	August	Sept.
Ave. Max. Temp. (F)	59.4	68.2	78.3	77.2	66.9
Ave. Min. Temp. (F)	28.6	35.8	37.5	34.4	27.3
Ave Precipitation (in.)	1.66	1.90	1.09	1.08	.97
Max. Temp. Extreme (F)	85	91	98	96	89
Min. Temp. Extreme (F)	8	19	20	11	3
Ave. Rel. Humidity (%) Missoula Field Station	61.5	62.5	54.5	52.5	60

The temperature and precipitation information provided here was gathered from the Western Region Climate Center. This information was recorded by a weather station located in Wisdom, Montana, approximately 11 miles east of the Battlefield. The relative humidity information was collected from a station in Missoula, Montana approximately 100 miles north of the Battlefield.

2. Fire Season

Big Hole's fire season is generally from mid-July through early-September, peaking in late summer when fuel moisture conditions are dry. A slight amount of fire activity can occur at the either end of this period depending upon the year, thereby extending the season from June to the end of September. Depending on the specific weather of any particular year, the seasons may be shorter or longer and, therefore, may start earlier or last longer.

3. Fuel Characteristics

Three different fuel types are currently recognized for the Montana FMU. Associated National Forest Fire Laboratory (NFFL) and National Fire Danger Rating System (NFDRS) models are used for fire behavior predictions (Anderson 1982, Deeming et. al 1977). The following information is provided for fuel types and models currently being used.

- **Sagebrush (NFFL MODEL #2, NFDRS MODEL T):** The gentle slopes and bench lands of the Big Hole Valley, found at about 6,300 to 6,500 feet, are occupied by this community. Big sage is the dominant shrub of the community at Big Hole. Native and non-native grasses are also found throughout this community. Vegetation in this area remains green during the first half of the fire season. Later on, as it cures, this community becomes more flammable.

Fire spread in NFFL 2 is primarily through the fine herbaceous fuel, either as curing or once dead. These are surface fires where the herbaceous material, in addition to litter and

dead-down stem wood from the open shrub or timber overstory, contribute to the fire intensity. Fires in the sagebrush models will generally kill much of the shrubby component, allowing grasses and forbs to reestablish in these areas with increased vigor and fire induced flowering.

- **Willow (NFFL MODEL #6, NFDRS MODEL F):** The riparian and riverine bottoms of the Big Hole Valley, found at about 6,300 feet, are occupied by this willow dominated community. Native grasses are found throughout the community. Vegetation in this area remains green during the majority of the fire season, but as the grasses cure the understory becomes more flammable near the end of the season.

Fire is generally carried in the shrubby fuels of NFFL 6, but may require moderate winds to carry fire from shrub to shrub. The fires can be intense in spots, but will drop to the ground at low speeds or at openings in the stand.

- **Mixed Conifer (NFFL MODEL #10, NFDRS MODEL G):** This community, found only on Battle Mountain at Big Hole at about 6,500 to 7,000 feet, is characterized by closed canopy stands of short-needle conifers. Lodge pole pine and Douglas fir are abundant on the east slopes, with scattered intrusions by ponderosa pine and blue spruce. Aspen are present, but scattered and few in number when present, and appear to be declining. Few shrubs and other understory plants are found due to thick forest litter and low light intensities. Fuels are continuous throughout this model and become more flammable towards the end of the fire season.

In NFFL 10, fires burn in the surface and ground fuels with greater fire intensity than other timber litter models. Dead-down fuels include greater quantities of 3-inch or larger limb wood resulting from over-maturity or natural events that create a large load of dead material on the forest floor. Crowning out, spotting, and torching of individual trees are more frequent in this fuel situation, leading to potential fire control difficulties (Anderson 1982).

Fires within the conifer types are generally restricted to surface fuels, consuming litter and reducing reproduction. Under most conditions, such fires are low intensity and short duration. Fire effects include removal of surface fuels, occasional scorching of trees, and the reduction of young woody second-growth. Larger trees (greater than 6" dbh) are susceptible to basal fire injury, but generally do not reduce in diameter growth, unless the crown is appreciably damaged by fire. Damage to the cambium of larger trees is directly related to season of fire occurrence, intensity, duration of heat, bark thickness, and frequency of burning. Trees are generally less susceptible to fire injury during the dormant season. Seedlings and saplings are readily killed by fire. Fire plays a significant role in the maintenance of forest stands and structure. Mixed pine forests, in many instances, are dependent on fire for the maintenance of balance between species.

Under unusual conditions, surface fires may torch out and occasionally crown where ladder fuels exist. The extent of such fire behavior is rather limited. Under these conditions fire intensity may be sufficient enough to consume organic matter of mineral soil. Such conditions occur only during periods of severe and infrequent drought. Under very dry conditions, fire in pockets of dense large fuels can produce enough heat to have measurable effects on the soil. Soil particles in the top inch of soil may fuse together decreasing soil wetability, increasing susceptibility to erosion, and causing subsequent nutrient and moisture stress on vegetation. These effects are variable, and changes in soil structure rarely reach more than two inches beneath the surface. Frequent reburns may accelerate soil creep or slump (Wells and others 1979).

4. Fire Regime Alteration

The historic fire regimes of the Montana FMU have been moderately modified through activities of man on the landscape. Livestock grazing reduced the light fuels that had historically carried fires in the forests and interspersed meadows. Even though efforts to control naturally caused fires began about 1906, the frequency of fires and the area burned decreased due to the animal consumption of perennial grasses which provided flash fuels.

After the U.S. Forest Service began management of the site in 1906, active fire suppression began in earnest. A full fire suppression policy has continued to the present under the management of the NPS. Fire no longer plays the ecological role it once did at the Big Hole site and this has resulted in long-term moderate changes to the vegetative composition of all three different fuel types present at the site.

5. Control Problems

Access to all of the burn units at the Big Hole site is limited due to the lack of access roads and steep terrain. In order to protect significance cultural resources present at the Big Hole National Battlefield, off-road vehicle traffic or fire line creation is generally not allowed within Montana FMU unless supervised and approved by park staff. The park site resides at a relatively high elevation (6,000 to 7,000) with somewhat unpredictable weather patterns. The peak fire periods also correspond to the peak visitation months of July, August, and September. Visitor protection and park evacuation are sometimes needed when lands in this FMU are threatened by wildfire.

The entire Montana FMU is represented by only one 655 acre site that is surrounded by mixed ownership. The park is bounded to the north by U.S. Forest Service property and all other sides by private ranch land. Lightning ignited fires on nearby U.S. Forest Service property can often times threaten Park resources.

6. Other Elements Affecting Management

The entire Battlefield is considered to be a sacred site by the Nez Perce people and significant cultural resources are located throughout the site. Thorough archaeological

and historic documentation exists regarding the occurrence and nature of many of these resources. All fire management activities to be undertaken involving the Montana FMU must involve Park resource management staff.

Big Hole National Battlefield does maintain a small fire cache, but due to the size of the park and its operational resources, there is only one currently qualified firefighter on staff. The park maintains a support relationship with the Beaverhead/Deerlodge National Forest and works cooperatively with Glacier National Park and Grant-Khosh National Historic Site for fire management expertise and guidance.

2. Idaho Fire Management Unit

This FMU is the largest of the NEPE/BIHO FMU's at 1,666 acres and includes five park sites located in north-central Idaho (Table 2). The NEPE/BIHO sites constituting this FMU were combined primarily due to current and historical vegetative communities, like management issues, and similarity of park cooperators and constituency. This FMU contains two prescribed burn units Spalding and White Bird Battlefield.

Table 2. Nez Perce National Historical Park sites located in the Idaho FMU

Park Site	Acreage
Canoe Camp	4.1 acres
East Kamiah	53 acres
Weippe Prairie	274 acres
White Bird Battlefield	1,245 acres
Spalding	90 acres

Figure 2. Map of Idaho Fire Management Unit.

I will need to create this map.

a. Physical and Biotic Characteristics

The major vegetation type included in this FMU as far as acreage is concerned, consists mainly of grasslands with components of sage and shrub as represented by the White Bird site. However, the four smaller sites included in this FMU consists mainly of grasslands with major riparian components exhibiting cottonwoods, alders, and willows. All five of these sites have undergone extensive vegetative change through human intervention. Grazing and past agricultural practices has reduced much of the riparian vegetation to narrow strips located immediately adjacent to the river or stream. At White Bird, this impact has resulted in reduced shrub components from ravines and other sheltered areas at the site. Noxious nonnative plants have invaded and gained a strong foothold in all of the areas. For the most part, all five park sites in the FMU are now dominated by nonnative grasses and forbs with very-little-to-no extant native communities present.

Sites such as Canoe Camp, East Kamiah, and Spalding have manicured park grounds as a major component of the site. These highly managed areas contain turf grasses and an overstory of ornamental trees. These three sites also have park facilities including visitor centers, restrooms, interpretive displays, and other visitor use areas.

The dominant soils for most of the sites included in this FMU can be considered deep and well drained. Major soil components for the sites located along the Clearwater River (Canoe Camp, East Kamiah, and Spalding) consist of alluvial silt loam formed of mixed loess with some basalt residuum exhibiting a medium potential for erosion. Present on some of the upper terraces, or inland areas of lower terraces, is also loam that is formed of colluvial materials with some residuum of basalt and/or volcanics generally exhibiting severe and very severe erosion potentials. Examples of these soils for the Spalding site include the Uhlig silt loam and the Chard loam. Both soils are well drained soils formed of mixed loess and alluvial material. When vegetative cover is removed, erosion potential is high for both soils.

For the White Bird site, the Banner silt loam and the Tannahill loam are most prevalent. Both soils are deep and well drained. The Banner silt loam is composed of loess and basalt residuum with medium erosion potential. The Tannahill loam is a colluvium and residuum of basalt and/or volcanics with severe and very severe erosion potentials. Soils found within the vicinity of the Weippe Prairie site have yet to be formally defined. However, in general they tend to be fairly deep, yet poorly drained. They're seasonally wet and seem to exhibit a high clay content.

No known threatened or endangered species have been specifically identified to permanently reside at any of the park sites included in this FMU. However, two listed threatened species may be found in the general region Gray wolf (*Canis lupus*) and Bald Eagle (*Haliaeetus leucocephalus*). Of those two, bald eagles do seasonally inhabit the Lower Clearwater River region and are occasionally seen at/or from the three Clearwater River sites (Canoe Camp, East Kamiah, and Spalding) included in this FMU. In general, the lack of extant riparian habitat and suitable nesting trees do not provide the resources necessary to facilitate long-term occupation and nesting opportunities at the FMU sites.

In addition to the terrestrial species mentioned above, much of the Clearwater River and many of its tributaries have been declared as critical habitat for the Snake River sockeye salmon (*Oncorhynchus nerka*) and the fall Chinook salmon (*Oncorhynchus tshawytscha*) and both are federally listed threatened species. In addition, the entire Snake River Basin has been designated as an Evolutionary Significant Unit for the West Coast steelhead (*Oncorhynchus mykiss*). Since all park sites included in this FMU lie in the Snake River drainage, all management responses must take into account potential impacts to aquatic resources.

All the park sites included in the Idaho FMU are entirely surrounded by private properties. The private ground is extensively utilized for agriculture, grazing, housing,

and recreation. Most all surrounding lands contain private residences in addition to portions of agricultural ground. Three of the park sites within this FMU exhibit significant park-built structures. These range from the Spalding site which has numerous large structures with a park visitor center, museum, collections storage, and maintenance areas, to the East Kamiah site with a small maintenance storage area, bathrooms, and interpretive shelter, to the Canoe Camp site with restrooms and interpretive displays.

b. Fire Management Objectives

Below are the three Fire Management Objectives that are consistent across all NEPE/BIHO Fire Management Units, followed by those specific to the Idaho FMU:

- Wildland fires are controlled during initial attack (48 hours or 100 acres).
- One-hundred percent of all prescribed burns and mechanical treatments will be conducted consistent with Federal, State, and local laws and monitoring of project results and ecological effects will occur to document the success of the program.
- Assist with the establishment and maintenance of the historic scene.

The fire management objectives for the Idaho FMU are described below:

- Manage vegetation to maintain vistas and to promote the growth of native grasses and to control nonnative woody vegetation and noxious weed encroachment.
- Limit fuel buildup.
- Manage vegetation to allow for and encourage wildlife use.

c. Management Considerations

- All wildland fires will be suppressed using an appropriate management response.
- Personnel and public safety are the highest priority for all fire management activities.
- Employ MIST strategies (reference Interagency Stands for Fire and Fire Operations and Appendix D).
- NEPE/BIHO neighbors, park partners, park visitors, and local residents will be notified of all planned and unplanned fire management activities having the potential to impact them.
- Park closures will be implemented at the discretion of the Superintendent.
- Ensure that no unacceptable impacts occur to cultural resources or T&E species.
- Ensure that air quality requirements are considered in developing implementation plans.
- Ensure socio-political economic impacts are considered in developing implementation plans.

d. Fire History

Nez Perce National Historical Park has a fire history extending from man's earliest arrival in the region. Lightning and man caused fires have burned over this area for at least the past nine thousand years of documented human occupation. Native American inhabitants of the land used fire to manipulate vegetative cover, improve feed and habitat

for desired game species, and remove unwanted vegetation from cultural and geologic features.

Numerous wildland fires occur annually on lands surrounding the park and the threat of fire is ever present. Most of these fires are man caused resulting from things such as: agricultural practices, uncontrolled debris burns, automobile accidents, carelessness, or other non-natural causes. Fires of natural origin occur infrequently on lands within and adjacent to the park. Most fires in the area occur during the summer months with the majority of ignitions in July, August, and September. These months are generally hot and dry although precipitation free months are rare. August and September temperatures at many of the Idaho FMU sites often exceed 100 degrees F.

e. Specifics of Wildland Fire Management

1. Historical Weather Info

Table 3. Historical Weather Information for the Idaho FMU

Idaho FMU Monthly Climate Summary (data from Lewiston, Idaho weather station) Period of Record 1948 to 2004					
	May	June	July	August	Sept.
Ave. Max. Temp. (F)	70.7	78.8	89.0	88.0	77.8
Ave. Min. Temp. (F)	46.4	53.1	58.9	58.2	50.3
Ave. Precipitation (in.)	1.50	1.37	0.62	0.73	0.76
Max. Temp. Extreme (F)	100	107	110	115	103
Min. Temp. Extreme (F)	23	34	41	41	28
Ave. Rel. Humidity (%)	45.5	41	31	31.5	40

The temperature and precipitation information provided here was gathered from the Western Region Climate Center. This information was recorded at a weather station located in Lewiston, Idaho. Lewiston is some distance from all most of the Idaho FMU sites, however, it is the closest station which can provide the historical weather information for all the sites in question.

2. Fire Season

Records show that the fire season common to the area encompassing the Idaho FMU is from early June through mid-September, peaking in late summer when fuel moisture conditions are extremely dry. A slight amount of fire activity occurs at the end of this period, extending the season from mid-May to the first of October. Depending on the

specific weather of any particular year, the seasons may be shorter or longer starting earlier or lasting longer.

3. Fuel Characteristics

Three different fuel types are currently recognized for the Idaho FMU. Associated National Forest Fire Laboratory (NFFL) and National Fire Danger Rating System (NFDRS) models are used for fire behavior predictions (Anderson 1982, Deeming et. al 1977). The following information is provided for fuel types and models currently being used.

- **Grass (NFFL MODEL #1, NFDRS MODEL L):** These areas are characterized by open grasslands and are dry, which allows surface fires to move rapidly through the cured grass and associated materials. Historically, this would have been the normal fuel type for the White Bird site and portions of the East Kamiah, Weippe Prairie, and Spalding sites. Currently, this is the dominant fuel type (acreage wise) throughout the Idaho FMU.

Fire spread in NFFL 1 is governed by the fine, very porous, and continuous herbaceous fuels that have cured or are nearly cured. Fires are surface fires that move rapidly through the cured grass and associated material. Generally, fires are of moderate intensity with rapid rates of spread of 50 to 80 chains/hour and flame lengths of 3 to 4 feet.

- **Hawthorn and Willow (NFFL MODEL #6, NFDRS MODEL F):** The riparian areas of the Weippe Prairie site are occupied by this hawthorn and willow dominated community. Currently, nonnative grasses and forbs are found throughout the community. In addition to the nonnative species, some native forbs such as camas and various lomatiums exist within this seasonally wet community. Vegetation in this area remains green during the majority of the fire season, but as the grasses cure the understory becomes more flammable near the end of the season.

Fire is generally carried in the shrubby fuels of NFFL 6, but may require moderate winds to carry fire from shrub to shrub. The fires can be intense in spots, but will drop to the ground at low speeds or at openings in the stand.

- **Open pine (NFFL MODEL #2, NFDRS MODEL C):** Fuel types are characterized by open fields with clumps of stands that generate higher intensities that may produce firebrands. These regions are relatively dry and are dominated by species such as native and exotic grass species, with clumps of conifers or other shrub/tree mixes. Locations of this fuel model are Canoe Camp, East Kamiah, and Spalding.

Fire spread in NFFL 2 is primarily through the fine herbaceous fuel, either curing or dead. These are surface fires where the herbaceous material, in addition to litter and dead-down stem wood from the open shrub or timber overstory, contribute to the fire intensity.

4. Fire Regime Alteration

The historic fire regimes of the Idaho FMU have been highly modified through activities of man on the landscape. Efforts to suppress natural and man-made fires first started with arrival of euro-American farmers and ranchers in the region in the mid-to late-eighteen hundreds. Livestock grazing and intensive agriculture has virtually eliminated the native vegetative communities. In many places, the major component of these communities has changed from bunchgrasses to grasses that create a much denser and more evenly distributed ground cover. This denser grass out competes and reduces the variation of native forbs and grasses. This creates a continuous mat of fine fuels, when coupled with suppression of naturally caused fires, results in much higher intensity fires with increased rates of spread.

5. Control Problems

Nearly all sites within the Idaho FMU are easily accessible via county roads. Steep terrain is a limiting factor with the White Bird site while the other four sites are basically flat. In order to protect the significant cultural resources present at all sites, off-road vehicle traffic or fire line creation is generally not allowed within FMU unless supervised and approved by park staff. The park sites included in this FMU reside at elevations ranging from 1,000 to 2,800 feet asl. Like most all sites located within Nez Perce National Historical Park, the peak fire periods also correspond to the peak visitation months of July, August, and September. Visitor protection and park evacuation are sometimes needed when park lands are threatened by wildfire.

All park sites within this FMU are entirely surrounded by private land ownership. All efforts should be made to control fires originating on NPS lands to keep them from spreading and threatening private property and life. Several of the sites included in this FMU also contain numerous structures which are occupied by visitors and park staff. The Spalding site contains the park headquarters and visitor center. This visitor receives a majority of the Park's visitors and contains an extensive museum collection of priceless Native American artifacts. In addition to the museum and office complex, the Spalding site is also home to the centralized Park maintenance operations. The main maintenance shop area and storage building are located on the lower bench just north of the visitor center. Several other vital historic structures are also located at the Spalding site. Both East Kamiah and Canoe Camp also contain significant NPS built and maintained structures.

6. Other Elements affecting management

All sites included in this FMU contain significant cultural resources. In addition, several of the sites are considered sacred by the Nez Perce people and are very significant.

Baseline archaeological and historic documentation exists regarding the occurrence and nature of many of these resources. All fire management activities to be undertaken involving the Idaho FMU must involve park resource management staff.

Nez Perce National Historical maintains a fire cache at the maintenance facility of the Spalding site, but due to the small size of the park and it's operational resources, there currently are no staff qualified as wildland firefighters. The park maintains support relationships with the Nez Perce Tribe, Clearwater and Nez Perce National Forests, and the Clearwater Fire Protection Agency for fire management expertise and guidance where needed.

3. Oregon/Washington Fire Management Unit

This FMU is represented by two small individual Nez Perce National Historical Park sites located in the Snake River Drainage in southeastern Washington and northeastern Oregon. The largest site is the Buffalo Eddy site at 94 acres. The other site included in this FMU is the Old Joseph Cemetery (Table 4).

Table 4. Nez Perce National Historical Park sites Located in Oregon/Washington FMU

Park Site	Acreage
Buffalo Eddy	94 acres
Old Joseph Cemetery	13 acres

Figure 3. Map of Buffalo Eddy Site

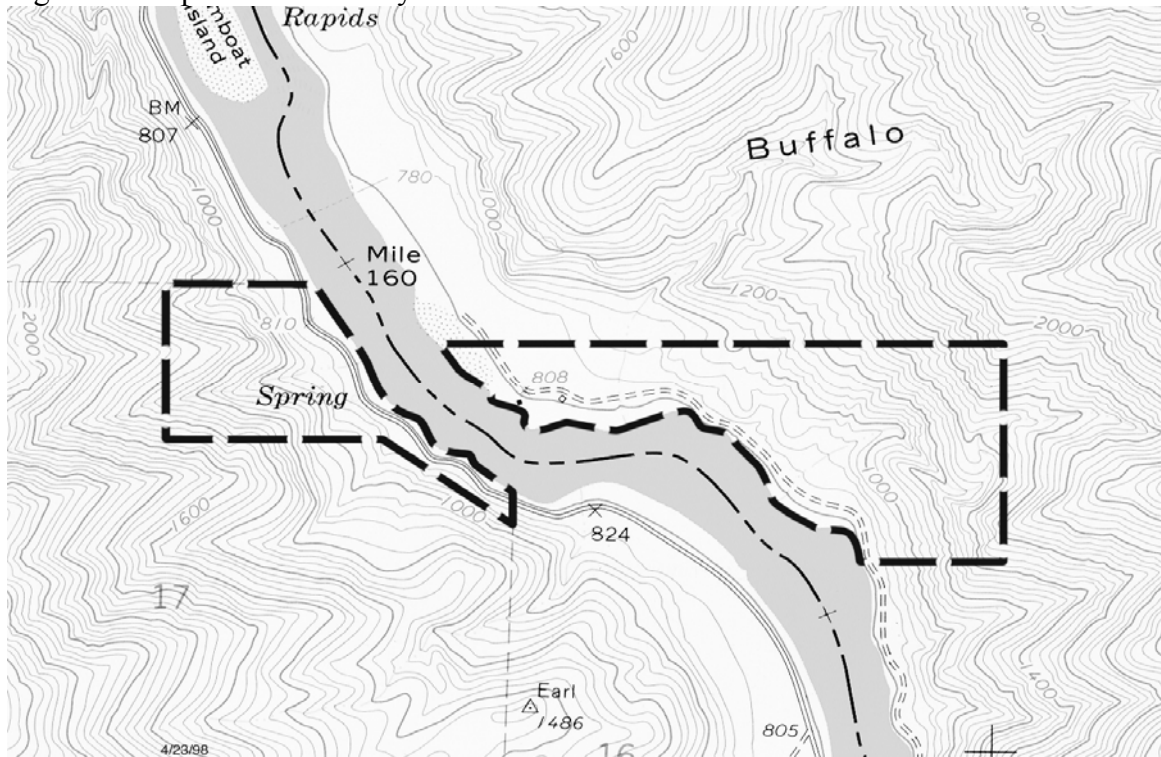
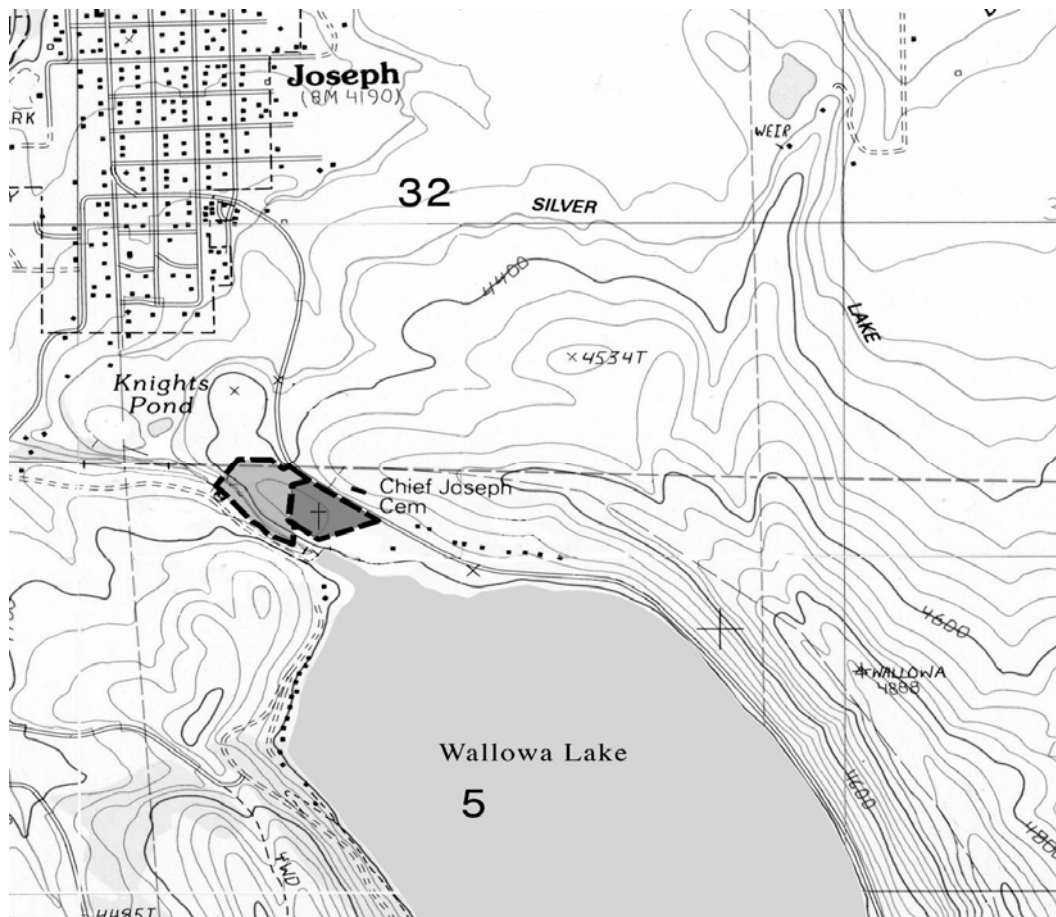


Figure 4. Map of Old Joseph Cemetery



a. Physical and Biotic Characteristics

The vegetation of the Nez Perce National Historical Park sites included in this FMU consists mainly of grasslands with a sage shrub component. The Buffalo Eddy site exhibits a stretch of hawthorn dominated riparian vegetation along the Snake River. The Old Joseph Cemetery site contains a light overstory of a few scattered ponderosa pine trees and some nonnative black locust and several other introduced species. Both of the sites included in this FMU have undergone limited vegetative change through human intervention. Primarily grazing at the Buffalo Eddy site and maintenance of the cemetery grounds at the Old Joseph site are really on the only major impacting activities on the vegetative community of the site. However, noxious nonnative plants have invaded and gained a strong foothold in many areas of the Buffalo Eddy site. This is less of a concern at the Old Joseph Cemetery site.

The dominant soils of the sites included in this FMU are generally deep and well drained. For the Buffalo Eddy site, the riparian areas have alluvial formed soils while the upper benches are primarily formed of mixed loess with basalt residuum. Like elsewhere in

Nez Perce National Historical Park these soils tend to have a medium to high erosion potential. This is especially the case when the vegetation has been removed through fire. The Old Joseph Cemetery site is formed primarily of glacial till resulting from the formation of Wallowa Lake. This material has also been mixed and capped in certain areas with aeolian loess.

No known threatened or endangered species have been specifically identified to permanently reside at any of the park sites included in this FMU. However, two listed threatened species may be found in the general region Gray wolf (*Canis lupus*) and Bald Eagle (*Haliaeetus leucocephalus*). One listed plant species, Spalding's Silene or commonly referred to as "Spalding's Catchfly" (*Silene spaldingii*) is potentially present at the Old Joseph Cemetery in northeastern Oregon. The NPS is planning to do a baseline vegetative inventory of this site in the future to determine if this species is in-fact present. However, until the plant's presence or absence has been confirmed, all fire-related planning and operations should be performed under the assumption that the plant is present at the site

In addition to the terrestrial species mentioned above, much of the Snake River and many of it's tributaries have been declared as critical habitat for the Snake River sockeye salmon (*Oncorhynchus nerka*) and the fall Chinook salmon (*Oncorhynchus tshawytscha*) and both are federally listed threatened species. In addition, the entire Snake River Basin has been designated as an Evolutionary Significant Unit for the West Coast steelhead (*Oncorhynchus mykiss*). All management responses must take into account potential impacts to aquatic resources.

The two park sites included in Oregon/Washington FMU are entirely surrounded by private properties. The private ground is extensively utilized for agriculture, grazing, housing, and recreation. Most all surrounding land contain private residences in addition to portions of agricultural ground. Both park sites within this FMU contain nationally significant cultural resources that may be impacted through fire management activities.

b. Fire Management Objectives

Below are the three Fire Management Objectives that are consistent across all NEPE/BIHO Fire Management Units, followed by those specific to the Oregon/Washington FMU:

- Wildland fires are controlled during initial attack (48 hours or 100 acres).
- One-hundred percent of all prescribed burns and mechanical treatments will be conducted consistent with Federal, State, and local laws. Monitoring of project results and ecological effects will occur to document the success of the program.
- Assist with the establishment and maintenance of the historic scene.

The fire management objectives for the Oregon/Washington FMU are described below:

- Manage vegetation to maintain vistas and to promote the growth of native grasses and to control woody vegetation and noxious weed encroachment.

- Limit fuel buildup at the Buffalo Eddy site.
- Manage vegetation to allow for and encourage wildlife use of Buffalo Eddy site.

c. Management Considerations

- All wildland fires will be suppressed using an appropriate management response.
- Personnel and public safety are the highest priority for all fire management activities.
- Employ MIST strategies (reference Interagency Stands for Fire and Fire Operations and Appendix D).
- NEPE/BIHO neighbors, park partners, park visitors, and local residents will be notified of all planned and unplanned fire management activities having the potential to impact them.
- Park closures will be implemented at the discretion of the Superintendent.
- Ensure that no unacceptable impacts occur to cultural resources or T&E species.
- Ensure that air quality requirements are considered in developing implementation plans.
- Ensure socio-political economic impacts included wildland urban interface, are considered in developing implementation plans.

d. Fire History

Nez Perce National Historical Park has a fire history extending from man's earliest arrival in the region. Lightning and man caused fires have burned over this area for at least the past nine thousand years of documented human occupation. Native American inhabitants of the land used fire to manipulate vegetative cover, improve feed and habitat for important game species, and remove unwanted vegetation from cultural and geologic features.

Numerous wildland fires occur annually on lands surrounding the park and the threat of fire is ever present. Most of these fires are man caused resulting from things such as: agricultural practices, uncontrolled debris burns, automobile accidents, carelessness, or other non-natural causes. Fires of natural origin occur infrequently on lands within and adjacent to the park. Most fires in the area occur during the summer months with the majority of ignitions in July, August, and September. These months are generally hot and dry although precipitation free months are rare. August and September temperatures at many of the Oregon/Washington FMU sites often exceed 100 degrees F.

e. Specifics of Wildland Fire Management

1. Historical Weather Info

Table 5. Historical Weather Information for the Oregon/Washington FMU

Oregon/Washington FMU Monthly Climate Summary (data from Lewiston, Idaho weather station) Period of Record 1948 to 2004					
	May	June	July	August	Sept.
Ave. Max. Temp. (F)	70.7	78.8	89.0	88.0	77.8
Ave. Min. Temp. (F)	46.4	53.1	58.9	58.2	50.3
Ave. Precipitation (in.)	1.50	1.37	0.62	0.73	0.76
Max. Temp. Extreme (F)	100	107	110	115	103
Min. Temp. Extreme (F)	23	34	41	41	28
Ave. Rel. Humidity (%)	45.5	41	31	31.5	40

The temperature and precipitation information provided here was gathered from the Western Region Climate Center. This information was recorded at a weather station located in Lewiston, Idaho. Lewiston is located approximately 30 miles north of the Buffalo Eddy site and 75 miles northeast of the Old Joseph Cemetery site.

2. Fire Season

Records show that the fire season common to the area encompassing the Oregon/Washington FMU is from early June through mid-September, peaking in late summer when fuel moisture conditions are extremely dry. A slight amount of fire activity occurs at the end of this period, extending the season from mid-May to the first of October. Depending on the specific weather of any particular year, the seasons may be shorter or longer starting earlier or lasting longer.

3. Fuel Characteristics

Two different fuel types are currently recognized for this FMU. Associated National Forest Fire Laboratory (NFFL) and National Fire Danger Rating System (NFDRS) models are used for fire behavior predictions (Anderson 1982, Deeming et. al 1977). The following information is provided for fuel types and models currently being used.

- **Grass (NFFL MODEL #1, NFDRS MODEL L):** These areas are characterized by open grasslands and are dry, which allows surface fires to move rapidly through the cured grass and associated materials. This is the dominant fuel type for this FMU and is present at both the Buffalo Eddy and Old Joseph Cemetery sites.

Fire spread in NFFL 1 is governed by the fine, very porous, and continuous herbaceous fuels that have cured or are nearly cured. Fires are surface fires that move rapidly

through the cured grass and associated material. Generally, fires are of moderate intensity with rapid rates of spread of 50 to 80 chains/hour and flame lengths of 3 to 4 feet.

- **Open pine (NFFL MODEL #2, NFDRS MODEL C):** Fuel types are characterized by open fields with clumps of stands that generate higher intensities that may produce firebrands. These regions are relatively dry and are dominated by species such as native and exotic grass species, with clumps of conifers or other shrub/tree mixes. Locations of this fuel model are at, and adjacent too, the Old Joseph Cemetery site.

Fire spread in NFFL 2 is primarily through the fine herbaceous fuel, either curing or dead. These are surface fires where the herbaceous material, in addition to litter and dead-down stem wood from the open shrub or timber overstory, contribute to the fire intensity.

4. Fire Regime Alteration

The historic fire regimes of the Oregon/Washington FMU have been drastically modified through activities of man on the landscape. Efforts to suppress natural and man-made fires first started with arrival of euro-American farmers and ranchers in the region in the mid-to late- eighteen hundreds. Livestock grazing and intensive agriculture has altered the native vegetative communities once present at both sites, but mostly those of the Buffalo Eddy site.

5. Control Problems

Both sites within the Oregon/Washington FMU are easily accessible via paved county roads which pass through or on the border of each site. The Buffalo Eddy site exhibits extremely steep topography across much of the NPS acreage and though it is bisected by a county road, it can represent difficult working conditions. The Old Joseph Cemetery site is relatively flat topography but is located near a major recreational area and numerous private residences. In order to protect the significant cultural resources present at both sites, off-road vehicle traffic or fire line creation is generally not allowed within FMU unless supervised and approved by park staff. Like most all sites located within Nez Perce National Historical Park, the peak fire periods also correspond to the peak visitation months of July, August, and September. Visitor protection and park evacuation are sometimes needed when park lands are threatened by wildfire.

Due to the surrounding landownership issues, all efforts should be made to control fires originating on NPS lands to keep them from spreading and threatening private property and life.

6. Other Elements affecting management

Both sites included in this FMU contain significant cultural resources. In addition, the sites themselves are considered, or contain resources that are considered to be, sacred by

the Nez Perce people. Some baseline archaeological and historic documentation exists regarding the occurrence and nature of many of these resources. All fire management activities to be undertaken involving the Oregon/Washington FMU must involve park resource management staff.

Due to the small size of the Oregon/Washington Unit of NEPE/BIHO and its operational resources, the Joseph, Oregon office does not maintain a fire cache and has no wildland fire fighting equipment. The park maintains support relationships with the Nez Perce Tribe and Wallowa-Whitman National Forest for firefighting assistance.

IV. WILDLAND FIRE MANAGEMENT PROGRAM COMPONENTS

Interagency recognition of risks and expenses associated with wildland fire management culminated in a December 1995 Final Report of the Federal Wildland Fire Management Policy and Program Review, issued by a team of fire management experts. The Secretary of the Interior has accepted and endorsed the principles, policies, and recommendations contained in the report, and has directed the NPS to implement them. NPS fire management activities will be performed in accordance with the principles, policies, and recommendations of the Final Report of the Federal Wildland Fire Management Policy and Program Reviews (DO-18).

The document, "Wildland and Prescribed Fire Management Policy, Implementation Procedures Reference Guide," represents an interagency effort designed to provide standardized procedures to guide immediate implementation of the policy described in the 1995 Federal Wildland Fire Management Policy and Program Review. The NEPE/BIHO FMP incorporates the implementation procedures, including the use of Wildland Fire Implementation Plans (WFIP) and Wildland Fire Situation Analysis, from the Reference Guide.

Much of the following information is based on the Wildland and Prescribed Fire Policy Implementation and Reference Guide, 1998. It is imperative that any users of this FMP become familiar with that guide.

A. General Implementation Procedures

A Wildland Fire Implementation Plan (WFIP) will be prepared for all NEPE/BIHO wildland fires. The Stage I: Initial Fire Assessment will be completed by the Initial Attack Incident Commander, in consultation with the NEPE/BIHO Integrated Resource Manager and Superintendent. This will document the current and predicted situation and provide the decision framework for selecting the appropriate management response based on which FMU the fire is located in. The decision criteria used in the Stage I assessment will be based on specific management considerations (these can be found under the heading *Management Considerations* in Section III 1c, 2c, and 3c above) for each NEPE/BIHO FMU.

B. Wildland Fire Suppression**1. Range of Potential Fire Behavior**

Fire spread in NFFL 1 is governed by the fine, very porous, and continuous herbaceous fuels that have cured or are nearly cured. Fires are surface fires that move rapidly through the cured grass and associated material. Generally, fires are of moderate intensity with rapid rates of spread of 50 to 80 chains/hour and flame lengths of 3 to 4 feet. This fuel type is located primarily in the Idaho FMU. However, it does constitute components of the vegetative community of the Oregon/Washington FMU.

Fire spread in NFFL 2 is primarily through the fine herbaceous fuel, either curing or dead. These are surface fires where the herbaceous material, in addition to litter and dead-down stem wood from the open shrub or timber overstory, contribute to the fire intensity. This fuel type is common to the Montana and Idaho FMUs

Fire is generally carried in the shrubby fuels of NFFL 6 common to the BIHO and Idaho FMUs, but may require moderate winds to carry fire from shrub to shrub. The fires can be intense in spots, but will drop to the ground at low speeds or at openings in the stand.

In NFFL 10 found only at the Montana FMU, fires burn in the surface and ground fuels with greater fire intensity than other timber litter models. Dead-down fuels include greater quantities of 3-inch or larger limb wood resulting from over-maturity or natural events that create a large load of dead material on the forest floor. Crowning out, spotting, and torching of individual trees are more frequent in this fuel situation, leading to potential fire control difficulties. (Anderson 1982)

2. Preparedness Actions**a. Fire Prevention Program/Education and Information**

An active fire prevention program will be conducted in conjunction with other agencies in the region to protect human life and property, prevent damage to cultural and natural resources, and to protect structures and facilities. A major component of this program will be public education regarding potential fire dangers. Visitor contacts, bulletin board materials, handouts, and interpretive programs will continue to be utilized to increase visitor and park neighbor awareness of fire hazards.

It is essential that employees be well informed about fire prevention and the objectives of the park's fire management program. Further, employees must be kept informed about changes in existing conditions throughout the fire season. These trained employees can also better relate to the public the beneficial effects of prescribed fires as opposed to unwanted human-caused fires.

During periods of extreme or prolonged fire danger, fire prevention messages will be included in all interpretive programs. Emergency site closures may become necessary.

Such restrictions, when imposed, will usually be consistent with those implemented by park cooperators. When prescribed fires are burning in the park, signs at visitor centers and Park unit bulletin boards will be used to supplement visitor contacts. These signs will be used to direct, inform, guide, and caution visitors about existing fire conditions and prescribed burn activities.

b. Annual Training

Departmental policy requires that all personnel engaged in suppression and prescribed fire duties meet the standards set by the National Wildfire Coordinating Group (NWCG). The National Park Service wildland fire qualification system meets or exceeds all NWCG standards. NEPE/BIHO will conform strictly to the requirements of the NPS wildland fire management qualification and certification system. Red-cards will be mandatory for all personnel engaged in fire suppression or prescribed fire duties.

Basic wildland fire training refreshers are offered annually for red-carded firefighters. Additional training is available from surrounding agencies in equipment operation, power saws, firefighter safety, fire weather and fire behavior, helicopter safety and park prescribed fire objectives and activities. On-the job training is encouraged and will be conducted at the field level. Whenever appropriate, the use of fire qualification task books will be used to document fire experience of trainees.

Personnel performing fire management duties will maintain a high level of physical fitness. This requires successful completion of a fitness pack test. Personnel must complete a three mile hike with a 45 pound pack in less than 45 minutes. For a more detailed description of physical fitness requirements see NPS-57 (Health Fitness Guidelines).

c. Annual Readiness

Two, fire caches are maintained within the Park. One is available at the Spalding maintenance compound and one at the Big Hole National Battlefield maintenance office located in the employee housing complex. Each cache contains hand tools, firefighter line packs, project fire packs, and personal protective equipment. In addition, each cache contains backpack pumps, hose and appliances, and drip torch equipment. The Integrated Resource Manager/BIHO Park Ranger is responsible for inventorying, re-supplying and stocking cache items prior to the onset of the fire seasons or prescribed burns. Appendix E lists park fire equipment.

Additional equipment and supplies are available through cooperators and the interagency cache system. Requests for additional personnel and equipment are made through the dispatch for the area. The fire and emergency contact list can be found in Appendix F

The following outline details the calendar year fire management program for Nez Perce NHP

January –May

- Perform physical exams as per standards in RM-18, Fire Management Guidelines.
- Meet with cooperators to review and revise interagency agreements, update FMP, and distribute to park partners.
- Inventory fire cache and insure all tools, equipment, kits and supplies are ready; order any needed materials.
- Meet with state and tribal agencies regarding smoke management.

April

- Meeting or discussion with SSO FMO to review plans and current program.
- Preseason planning completed; all cooperative agreements revised and in effect.
- Implement Step-Up Plan; adjust level of readiness in response to fire danger levels.
- Continue planning for prescribed fire program.

May

- Check the established NPS regional procedure for utilizing suppression and emergency preparedness accounts.
- Maintain fire contacts with SSO FMO, nearby agency FMO's, and cooperators.
- Coordinate dispatch procedures with local dispatch.
- Probable begin of fire season.

May to End of September (Fire Season)

- Notify park neighbors, partners, and any public of any prescribed burns.

June

- Physical fitness testing, issue PPE, and issue red cards to any new seasonal personnel.
- Issue updated fire call-out list to the SSO FMO.

September

- Probable end of fire season.

October through December

- Review interagency agreements, draft revisions as necessary, and submit to the Superintendent for approval.
- Inventory fire cache and requisition replacement equipment and supplies to maintain approved levels.
- Critique fire season including all fire management activities (i.e. wildland fire suppression, Rx fires, mechanical fuel treatment, prevention, monitoring, etc.).
- Evaluate individual performance of Park staff to correct deficiencies and recommend personnel for training.

d. Fire Weather and Fire Danger

1. Weather Station Information

The Missoula, Montana Field Station of the National Weather Service is centrally located for all NEPE/BIHO sites. They gather the most current weather data from the area encompassing the three NEPE/BIHO FMU's. They maintain a Fire Weather Forecasting website that includes current conditions, spot forecasts, daily briefings, fire danger class, and the complete range of weather related measurements. They are also available for phone consultations.

Current weather information applicable to most of the NEPE/BIHO sites can also be gathered from several RAWS stations located in the region. The Nez Perce Tribe has recently installed a RAWS station within the park boundaries at the Spalding site. We can access this information via a direct internet link. This information can then be utilized with the assistance of park cooperators, to assist in determining whether a burn window may develop that meets the descriptions delineated in a specific burn prescription.

In addition to the Spalding station, there are also several RAWS stations maintained by the Beaverhead/Deer Lodge National Forest located in the vicinity of the Big Hole National Battlefield. Information from these stations are accessible via the internet and with the assistance of park cooperators, can be utilized to determine if burn prescription windows have been reached.

2. NFDRS

The following are indices that may be used for trend monitoring during the fire season. The application and source of each factor is also listed. These factors must be monitored daily when considering wildland fire decisions.

Table 6. Fire Trend Monitoring Indices

Factor	Application	Source
NFDRS	Relative Fire Danger	USFS – Nez Perce National Forest - Beaverhead/Deerlodge
Historical Weather Data	Risk Assessment	Western Regional Climate Center/NWS – Missoula
Regional Fire Activity	Resource Availability	USFS - N. Idaho FPU/Dillon FPU
Live Fuel Moisture	Fire Behavior Prediction	Nez Perce Tribe/USFS – RAWS station
Fire Weather	Fire Behavior/Danger	NWS - Missoula

Fire danger thresholds are a key element, as they will drive almost all fire management actions. NEPE/BIHO has developed thresholds to be used for prevention, initial response, large action fires, and prescribed fire activities. The personnel going through the decision making process will review the above noted factors from the corresponding sources and will then make recommendations for action.

e. Step-up Staffing Plan

Preparedness activities during the fire season are based on the National Fire Danger Rating System (NFDRS). Fire days are broadly divided into five staffing classes according to the intensity of danger factors as indicated by the Burning Index (BI). The BI integrates the effects of weather, fuels, and topography to estimate potential fire behavior and the corresponding amount of effort required to contain a fire. The staffing classes relate to the expected severity of fire conditions.

Staffing class levels are based on the cumulative frequency distribution of the BI. Class IV and V represent the 90th and 97th percentile, respectively, of historic BI's. The park will utilize BI's calculated at the closest available USFS or other park cooperator's weather station.

Available personnel/resources, fire situation, and predicted fire behavior will determine the response level to maintaining, or curtailing normal park operations. Minimum staffing levels will be considered annually in the Fire Management Plan and any Prescribed Burn Plans to prevent over-extension on call-out commitments for overhead positions and crew personnel.

Preparedness actions are based on the predicted fire weather before 1400 hours and on actual fire weather after 1400 hours for all staffing classes.

Table 7. Readiness Class levels for NEPE/BIHO.

Readiness Class	Burning Index *	Description of Action
I	0-10 ID 0-16 MT	No activity necessary. Normal eight (8) hour tours of duty. Red-carded employees are available to respond and take necessary action on any fire reported.
II	11-20 ID 17-36 MT	Normal eight (8) hour tours of duty. Fire equipment and supplies serviced and prepared for use.
III	21-39 ID 37-46 MT	Normal eight (8) hour tours of duty. Park is totally prepared to respond to a fire. Location of red-carded staff are known to all relevant personnel. Red-carded personnel have fire tools and personal protective equipment immediately available in their work vehicles or at their work site.
IV	40-46 ID 47-55 MT	All activities in Readiness Class III are continued. High Fire Danger notices will be posted in Visitor Centers and at site bulletin boards. Cooperators are contacted and activities coordinated (federal, state and county fire departments) in an effort to provide consistent information to the public and park neighbors. Tour of duties may be extended to 7 days/week, ten hours/day if deemed appropriate. Restrictions and closures of park areas may be deemed necessary after

		consultation w/NPS Regional Directorate.
V	46+ ID 56 + MT	All activities in Readiness Class IV are continued. All fires are prohibited including the use of fire grates, grills, and stoves. Interpretive activities will include a fire safety message. Implement fire closures and restrictions with interagency coordination and concurrence of regional NPS Directorate.

* Different burning indices are reflected in the table above based upon the Burning Index (BI) or Energy Release Component (ERC), depending on where the calculations are obtained from. All the NEPE/BIHO sites located in the Idaho FMU and Oregon/Washington FMU use Burning Index calculations and are labeled with “ID” above. The Montana FMU uses the ERC index calculated from the Beaverhead/Deer Lodge National Forest and are indicated with “MT” in the table above.

3. Pre-Attack Plan

Due to the small size and scope of the NEPE/BIHO fire program, no formal pre-attack plan has been written (as detailed in RM-18, Chapter 7, Exhibit 3). However, certain preparations and procedures are established prior to and during the fire season. Some are mentioned in the Preparedness Actions section of this FMP above, other pre-attack options are informally discussed among park staff in conjunction with park cooperators during regular meetings. The value of a written pre-attack plan, or checklist, is however recognized (see Appendix G for a Pre-Attack Checklist). Such preparation will emerge if the NEPE/BIHO fire program evolves into a more complex and operationally committed program.

4. Initial Attack

a. Information Used to Set Initial Attack Priorities

Fires occurring in the Idaho and Montana FMU’s will be considered of higher priority than fires occurring in the Oregon/Washington FMU (unless the a fire in the latter poses a threat to private resources or public safety). This is primarily due to the fact that most all park sites located within the Idaho and Montana FMU’s are the most highly visited sites within the park, contain nationally significant cultural resources, are relatively small sites, are located near or within residential areas (with the exception of the Montana FMU), and some sites contain NPS structures. The following informational sources will be used to set priorities:

- Park facilities maps.
- Vegetation information from resource management plan, vegetation management plan, cultural landscape inventories, and grounds design plans.
- Cultural and historical site maps and databases.
- Wildlife information and T&E species data.

b. Criteria for Initial Attack Response

All wildland fires will have a completed Wildland Fire Implementation Plan (WFIP) Stage I. Park fire management policy does not allow “Wildland Fire Use” so there will not be a need to go beyond a Stage I assessment of the wildland fire event.

Initial attack sequencing, upon discovery of a fire, will be based on the following:

- The Incident Commander will locate, size-up, and coordinate suppression actions.
- Public safety issues will be identified and addressed.
- Considering the current and predicted fire conditions, the Incident Commander will assess the need for additional suppression resources and estimate the final size of the fire. The potential for spread outside of the park should be predicted, as well as the total suppression force required to initiate effective containment action at the beginning of each burning period.
- The Incident Commander will assess the need for law enforcement personnel for traffic control, investigations, evacuations, etc. and make the request to appropriate dispatch.
- Document decisions and complete the fire report (DI-1202).
- The NEPE/BIHO Superintendent makes all final decisions on a fire. However, should a wildland fire move into an extended attack, a Delegation of Authority will be invoked. Once a Delegation of Authority has been authorized, the Incident Commander will ensure resource objectives are in compliance with the WFSA. A copy of the Limited Delegation of Authority form is in Appendix H.

Management responses to wildland fires occurring on any lands administered by NEPE/BIHO will be based upon the following criteria that are derived from the overall park management direction as referenced in park management documents such as the GMP and RMP.

- Personal safety is always the highest priority. This includes the safety of the visiting public, park staff, nearby park neighbors, and firefighters.
- Protection of adjacent private property.
- Protection of significant cultural resources. This includes archaeological sites, cultural features, sacred sites, historic structures, and traditional use areas.
- Protection of significant natural resources such as riparian areas, wildlife habitat areas, and T&E species.
- Maintenance of the cultural landscape and enhancement of the visual scene.
- A confinement strategy may be selected for initial attack as long as it is not being used solely to meet resource management objectives. Resource benefits may be a by-product, but the strategy must be based upon the criteria listed above.
- MIST or "light hands" techniques will be employed within park boundaries. Use of heavy equipment for line construction will not be used except in situations where threat to life or property is imminent, or with the express approval of the Superintendent.

c. Confinement as an Initial Attack Suppression Strategy

Confinement may be implemented as the initial attack action as long as it is not used to meet resource objectives. A confinement strategy may also be selected in the WFSA process when initial attack has failed to contain a wildland fire. When confinement is selected as the initial action, a WFIP will be prepared in stages as the fire management conditions change and associated considerations require additional attention.

Confinement would mostly likely be utilized in the Montana FMU where the park sites are more remote, have available fire containment features (i.e. rock outcroppings, border roads or trails, etc.), and exhibit a lower probability of impacting significant NEPE/BIHO or neighboring resources. This strategy may also be used in the other two NEPE/BIHO FMU's as dictated by conditions or when local resources are limited or unavailable.

d. Typical Fire Response Times on Unit by Resource Type and Time of Year

NEPE/BIHO maintains two fire caches located at the Spalding site and the Big Hole National Battlefield site but currently has only one red carded park staff and no response equipment. All NEPE/BIHO sites rely on the assistance of park cooperators to handle wildland fire suppression response activities. The typical fire season at most NEPE/BIHO sites runs from late May/early June through late September and response times of partnering agencies can vary depending upon the year and fire season.

Estimated response times based on distance from sites is provided in the table below:

Table 8. Response times to NEPE/BIHO sites.

Responding Agency	Response Time							
	Mont. FMU	Oregon/Washington		Idaho FMU				
Beaverhead/Deer Lodge National Forest	1 hr.	Buffalo Eddy	Old Joseph	Canoe Camp	East Kamiah	Weippe Prairie	White Bird	Spalding
Clearwater Fire Protection Agency				10 min.	1 hr.	1 hr.	1.5 hr.	
Nez Perce Tribe		1.5 hr.						15 min.
Wallowa/Whitman National Forest			15 min.					

e. Restrictions and Special Concerns by FMU

1. Montana FMU

The entire Big Hole National Battlefield is considered a sacred site by the Nez Perce people and significant cultural resources are located throughout the site. Thorough archaeological and historic documentation exists regarding the occurrence and nature of

many of these resources. All fire management activities to be undertaken involving the Montana FMU must involve park resource management staff.

The North Fork of the Big Hole River runs through Big Hole National Battlefield and is potential habitat for Arctic Grayling, a species with candidate status under the ESA. Several other T&E species may be potentially located in the general vicinity of the site and must be considered during all fire management activities. The upper bench portion of the site contains numerous the NPS visitor center and museum area, maintenance facilities, and park housing complex. The topography and significant resources of the site require utilization of MIST tactics. Fire line creation and vehicle traffic across the site is generally not allowed unless deemed necessary and performed under the supervision of park staff and approved by the park Superintendent.

2. Idaho FMU

In order to protect significant resources present at all sites within this FMU, off-road vehicle traffic or fire line creation is generally not allowed unless supervised by park staff and approved by the Superintendent. Most park sites within this FMU are surrounded by private land ownership. All efforts should be made to control fires originating on NPS lands to keep them from spreading and threatening private property and life.

All five sites included in this FMU contain significant cultural resources. In addition, several of the sites are considered sacred by the Nez Perce people. Good baseline archaeological and historic documentation exists regarding the occurrence and nature of many of these resources. All fire management activities to be undertaken involving the Idaho FMU must involve park resource management staff.

Several of the sites included in this FMU also contain numerous structures which are occupied by visitors and park staff. The Spalding site contains the park headquarters and visitor center. This visitor center receives a majority of the Park's visitors and contains and extensive museum collection of priceless Native American artifacts. In addition to the museum and office complex, the Spalding site is also home to the centralized Park maintenance operations. The main maintenance shop area and storage building are located on the lower bench just north of the visitor center. Several other vital historic structures are also located at the Spalding site. Both East Kamiah and Canoe Camp also contain significant NPS built and maintained structures.

3. Oregon/Washington FMU

In order to protect the significant resources present at all sites, off-road vehicle traffic or fire line creation is generally not allowed within FMU unless supervised by park staff and approved by the Superintendent. Like most all sites located within Nez Perce National Historical Park, the peak fire periods also correspond to the peak visitation

months of July, August, and September. Visitor protection and park evacuation are sometimes needed when park lands are threatened by wildfire.

All park sites within this FMU are entirely surrounded by private land ownership. All efforts should be made to control fires originating on NPS lands to keep them from spreading and threatening private property and life.

4. Limitations relative to all three FMU's

The following limitations have been placed on the types of equipment used in the Park and include:

- Dozers shall not be used within the Park boundaries unless authorized by the Superintendent.
- Water sources are not locally abundant. Portable pumps and complex hose lays can be used in lieu of, or to supplement, constructed fire lines near the water sources.
- Wildland fire engines can be utilized where roads (access & service) currently exist; no off-road driving will be permitted unless authorized by the Superintendent.
- Mop-up and patrol should be methodically planned and executed in control situations. Fires can burn into the duff around larger trees. Smoldering snags may have to be felled or bucked to insure safety and to completely extinguish the fire.
- Light Hand on the Land (MIST) tactics should always be employed and are listed in Appendix D

Aircraft may be used in all phases of fire management operations. Aircraft must be approved by the Office of Aircraft Services (OAS), BLM, NPS, or Forest Service.

Helicopters may be used for reconnaissance, bucket drops, aerial ignition and transportation of personnel and equipment. Natural heli-spots and parking lots are readily available in most cases. Clearing for new heli-spots should be avoided where possible. Improved heli-spots will be rehabilitated following the fire.

As in all fire management activities, safety is the primary consideration. Qualified aviation personnel will be assigned to all flight operations.

f. Special Issues

In general, local partner agency fire departments usually provide initial attack on Park fires. The lack of qualified fire personnel within the Park as well as the Park's configuration make an initial and extended attack capability impractical. Interagency overhead teams may be called upon to manage or assist the Park with initial attack, project fires, or monitoring prescribed burns. The Park subscribes to the "closest forces concept", and all contingency plans are jointly formulated at the regional level. Due to

the small number of NEPE/BIHO staff, regional NPS assistance with budgeting, resource call-ups, and other fire-related personnel issues may be requested.

All three NEPE/BIHO FMU's contain cultural resources of significance to the Nez Perce people. The Nez Perce Tribe also has a Tribal Historic Preservation Office with compliance responsibility over cultural resource issues within the Nez Perce Reservation. The park consults closely with tribal experts on the management and protection of these resources.

5. Extended Attack and Large Fire Suppression

In accordance with RM-18, wildland fires will be suppressed in a “safe, aggressive, and cost-effective manner to produce efficient action with minimal damage to resources.” Suppression involves a range of possible actions from initial attack to final suppression. All wildland fires within NEPE/BIHO sites will be suppressed.

Personnel and equipment must be efficiently organized to suppress fire effectively and safely. To this end, the Incident Commander assumes or delegates the command function on major or multiple fire situations, setting priorities for the use of available resources and establishing a suppression organization.

a. Determining extended attack needs

Extended attack needs will be determined by considering the following:

- Threats to life, property, and Park resources.
- Availability of suppression forces.
- Current and expected fire behavior

b. Implementation Plan Requirements: WFSA Development

For fires that resist initial suppression action and carry over into extended attack, a WFSA must be prepared as shown in Appendix I. In the case of a wildland fire, the Incident Commander, in conjunction with park staff, will prepare the WFSA. Approval of the WFSA resides with the Superintendent.

The purpose of the WFSA is to allow for consideration, alternatives by which a fire may be controlled. Damages from the fire, suppression costs, safety, and the probable character of suppression actions are all important considerations. (Seaver et.al., 1983)

Public safety will require coordination between any local or tribal enforcement personnel, and park interpretive personnel. Notices should be posted to warn visitors, trails may be closed, traffic control will be necessary where smoke obscures the roadway, etc. Where wildland fires cross public roads, the burned area adjacent to the road will be mopped up and dangerous snags felled. Every attempt will be made to utilize natural and constructed barriers, including changing fuel complexes, in the control of wildland fire.

Rehabilitation efforts will generally concentrate on the damages done by suppression activities rather than on the burned area itself.

c. Complexity Decision Process for Incident Management Transition

Refer to the guidance in RM-18, Chapter 9, Initial and Extended Attack when the need to transition from initial attack to extended attack and from extended attack to Type I or Type II incident management arises.

d. NEPE/DIHO Delegation of Authority for Incident Commander

There will be only one Incident Commander responsible to the Superintendent. The Incident Commander will designate all overhead positions on fires requiring extended attack. Reference should be made to the Delegation of Authority form required by RM-18. A Limited Delegation of Authority form is found in Appendix H.

6. Exceeding Existing WFIP – Selecting a New Strategy

Following the guidance contained in the Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide, a WFSA will be completed when a new strategy is deemed necessary by the IC or Superintendent.

A new strategy must be developed if a wildland fire cannot be controlled during the initial suppression response action or where the appropriate management response action, especially in the case of a confinement action, has not been successful. Another example includes when a wildland or prescribed fire leaves the NPS managed property boundary or some other contingency boundary and threatens structures or important resources on neighboring lands. A new strategy may need to be developed if the regional or national fire situation escalates and fire management resources are in short supply.

Priorities for action if a fire requires a new strategy should be based first on safety of the public and firefighters. Secondary priorities include protection of private property and significant NEPE/BIHO resources and facilities.

7. Specific Minimum Impact Suppression Guidelines (MIST) for NEPE/BIHO

All fire management activities involving NEPE/BIHO park sites will rely on tactics which do a minimum amount of resource damage while maintaining the safety of firefighters, park staff, and the public as the highest priority.

Superintendent approval is needed for off road use of vehicles and mechanized equipment, for use of bulldozers, and for development of helicopter landing sites. Every effort should be made to utilize existing features such as rock outcrops, roads, trails, or vegetation breaks as fire lines. No fire lines will be installed without prior approval by the Superintendent and supervision by Park resource management staff.

MIST guidelines can be found in Appendix D.

8. Description of Short and Long-term Rehabilitation Requirements

When suppression action is taken, rehabilitation is appropriate. The most effective rehabilitation measure is prevention of impacts through careful planning and the use of MIST suppression techniques.

The Incident Commander or NEPE/BIHO Integrated Resource Manager will initiate rehabilitation actions as approved by the park Superintendent. Rehabilitation will be directed toward minimizing or eliminating the effects of the suppression effort and reducing the potential hazards caused by the fire. The short-term actions may include the following:

- Backfill control lines, scarify, and seed.
- Install water bars and construct drain dips on control lines to prevent erosion.
- Install check dams to reduce erosion potential in drainages.
- Remove all flagging, equipment and litter, and completely restore heli-spots.

Long-term actions that may be taken to rehabilitate fire impacted areas of NEPE/BIHO park sites include:

- Consider and plan more extensive rehabilitation or revegetation to restore impacted sensitive areas.
- Restore natural ground contours.
- If revegetation or seeding is necessary, only native plant species will be used.

If emergency rehabilitation measures are needed or if rehabilitation is needed to reduce the impacts of a wildland fire, then NEPE/BIHO will request appropriate funding through the Burned Area Emergency Rehabilitation (BAER) fund. The BAER fund is administered through the NPS representative at the National Interagency Fire Center and national BAER team leader.

Rehabilitation plans for each fire will be formulated by the Integrated Resource Program Manager, subject to review by appropriate park staff and cooperators. A final plan will be submitted to Region for establishing a BAER account. Rehabilitation should be initiated prior to complete demobilization or early the following season.

9. Completion and Tracking of Fire Records and Reports

The Incident Commander is responsible for all fire related records and reports with the assistance of the appropriate park staff, as delegated by the park Superintendent. This responsibility may be delegated to an incoming Incident Management Team during an extended attack fire.

a. Individual Fire Reports (DI-1202)

The basic report for documenting a wildland fire is the Individual Fire Report (DI-1202). The report is valuable as it provides a historical record of the fire regimes for NEPE/BIHO. As such, it's important that all fires occurring within the Park boundaries are documented with this form. This includes fires that go out on their own when the

location can be documented. The DI-1202 is also the basic document used by the Boise Interagency Fire Center to document a fire occurrence.

The Incident Commander for the fire is the person responsible for preparation of the Individual Fire Report. In most cases, this is the individual who put the fire out. That person may also want to complete a Case Incident Report (Form 10-343) in addition to the DI-1202. Fires will be sequentially assigned a fire number by calendar year, i.e. fires in 2004 are numbered 0401, 0402, etc.

A complete fire report will include the following attachments, if applicable (Instructions for filling out the report are found in RM-18):

- Any written policies, guidelines, or authority statements signed by the park Superintendent.
- Copy of the WFIP.
- Copies of equipment purchased or personnel request orders.
- All situation maps.
- Personnel lists (including Emergency Time slips).
- Press clippings.
- Accident reports.
- All weather data reports and records.
- Documentation of financial charges made against the assigned PMP.
- Rehabilitation plan.

The report is then submitted, in draft, to the Integrated Resource Manager and appropriate park Unit Manager. The responsible park staff will review the report for completeness and then records the information for permanent park record keeping. That procedure also produces a final draft of the form for the files. The information will also be entered into the Wildland Fire Management Computer System. Finally, a copy of the DI-1202 will be sent to the Regional NPS Fire Management Office and any interested park cooperators.

b. Daily Situations Reports

These reports are required when a fire has occurred or is on-going. The Incident Commander is responsible for the preparation of the report and entering it into the Wildland Fire Management Computer System by 9:30 a.m.

c. Smoke Management Reports

Smoke Management reports will be prepared by park staff when requested by the States or the Nez Perce Tribe.

d. Report of Fire

When a report of a fire is received, the following information should be collected from the reporting party:

- Name of reporting party
- Address
- Phone number
- Location of fire and extent
- If the fire is reported in person, ask if the reporting party is willing to show the investigating ranger the location, or collect sufficient information in order to contact the person if there are additional questions.

The park relies on fire reports from visitors, park staff, park neighbors, and other agencies. Private and commercial pilots on aerial overflights may also provide detection of smoke.

At sites other than Spalding or Big Hole Battlefield, it is unlikely that the park would be contacted initially in the event of a fire. Visitors, adjacent land owners, and Park partners can be expected to notify local agencies with fire suppression responsibilities. Even at the Spalding Site and Big Hole Battlefield, any fire detected by other than NPS employees may be reported to other agencies with local fire fighting responsibility.

The Fire Management Plan does not discriminate between human-caused and lightning caused fire. All non-prescribed fires will be suppressed. However, detection shall include a determination of fire cause. Moreover, human-caused fires will require an investigation and report by law enforcement personnel. For serious human-caused fires, including those involving loss of life, a qualified arson investigator will be requested.

e. Resource Order Form

All assistance requests must be documented on the Resource Order Form, NFES 1470. These forms are designed to be transmitted verbally over the telephone. The order form is, in essence, an obligating procurement document.

Whenever an out-of-park incident management team is ordered, the Superintendent must provide a written limited delegation of authority and a briefing package to the incoming Incident Commander. See RM-18 for further details.

f. Year-End Accomplishment Report

Completion of year-end accomplishment reports is the responsibility of the Integrated Resource Manager and the appropriate Unit Manager.

C. Wildland Fire Use

There will not be a “Wildland Fire Use” program at NEPE/BIHO. All non-management ignited fires will be treated as unwanted wildland fires and suppressed using the appropriate management strategy. Wildland fire use is not recommended for use on any of the NEPE/BIHO

FMU's. Therefore, specific items needed for parameters of use, pre-planning, implementation, staffing, and permanent records are not defined or used in this FMP.

D. Prescribed Fire

1. Planning and Documentation

a. Description of Annual Activities to Prepare for and Implement the Program

The Fire Analysis Committee in conjunction with NEPE/BIHO cooperators will review prescribed fire activities annually. Necessary updates or changes to the Fire Management Plan will be prepared by the NEPE/BIHO Integrated Resource Manager prior to the next fire season. Any additions, deletions, or changes will be reviewed by the regional NPS fire staff to determine if such alterations warrant a re-approval of the plan.

Annual activities will include:

January to April

- Review potential projects and assess staffing requirements.
- Check on any contractual needs for implementation of projects.
- Meet with park cooperators on prescribed burn logistics and boundaries.
- Order replacement equipment for program.
- Initiate budget process for next Fiscal Year.
- Prepare and submit planned burn permits to airshed advisory groups of any planned prescribed burns.

May

- Visit planned burns with Burn Boss to finalize planning details.
- Complete initial project plan

June

- Completed draft of prescribed burn plan reviewed by Fire Analysis Committee and interagency cooperators.
- Schedule monitoring needs for future projects.
- Complete monitoring necessary for current and completed projects
- Develop budget for next FY.

July to August

- Finalize prescribed burn plan with Burn Boss and Superintendent prior to burn.
- Complete budget and all details of prescribed burn with Integrated Resource Manager and Burn Boss

September to October

- Complete burn.
- Summarize accomplishments.

- Review/critique of projects and program by the FAC.

November to January

- Submit annual planned burn report to airshed advisory groups for next season prescribed burns (MT only).

b. Prescribed Fire Strategy for NEPE/BIHO FMU's

Prescribed fire can be a useful tool for restoring and maintaining natural conditions and processes at NEPE/BIHO and may be used on burn units in two of the park's FMU's. The goals for the prescribed fire program are consistent across all park FMU's and they relate to direction provided from the approved park GMP and RMP.

General NEPE/BIHO prescribed burn objectives will be the following:

- Enhance and maintain the significant cultural landscapes.
- Reduce fuel accumulations and lessen the potential intensity and rate of spread of future wildfires.
- Reduce exotic vegetation in park sites and replicate natural fire frequency intervals under managed conditions.
- Manage vegetation to maintain vistas, promote growth of native species, and control encroachment and spread of noxious species.

Prior to execution of prescribed burns, some fuel modifications may occur. This includes pre-treatment (mechanical reduction and movement of fuel loading) along the control perimeter. Interior fuel modification may also be planned and implemented to facilitate fire spread and effectiveness.

These overall strategies will be integrated into specific burn objectives, fire frequency rotation, firing methodology, and prescriptions that may vary from year to year. Burn plans will be updated annually or as needed to reflect any variations. The Superintendent will have the authority to approve prescribed burn plans.

Research burning may be conducted when deemed necessary for accomplishment of research project objectives.

Table 9. Planned Burn Units by Fire Regime Group and Condition Class

NEPE/BIHO FMU	Prescribed Burn Unit	Treatment	Fire Regime Group	Pre/Post Condition Class
Montana	Bench land	Mechanical Aspen and pine removal in 2005. Prescribed fire for canals possible in 2007.	II	Pre-Class II
	Riparian		II	Pre-Class II

	Forest	Mechanical Lodge pole pine treatment in 2002 and 2003. prescribed fire possible in 2008	IV	Pre-Class II
Idaho	White Bird	Wildland fire in 2004.	II	Post-Class II
	Spalding	Mechanical black locust and tree-of-heaven removal in 2003	II	Pre-Class II

Due to the lack of in-house expertise and the nature of the park, NEPE/BIHO utilizes an interagency team approach for completing prescribed burns carried out within its boundaries. Highly qualified and experienced personnel in the regional interagency community are requested to serve on these teams as the need arises.

The Superintendent, in consultation with the NPS regional staff and interagency cooperators, will recommend a Prescribed Burn Boss for each planned burn where the NPS has the primary planning role. NEPE/BIHO staff will prepare a draft copy of the prescribed burn plan for review by the Superintendent, interagency cooperators, and regional NPS fire personnel. The Prescribed Burn Boss will conduct a field reconnaissance of the burn location with the appropriate NEPE/BIHO staff to discuss objectives, special concerns, and gather all necessary information to complete the burn plan. After completing the reconnaissance, the Prescribed Burn Boss and the appropriate park staff will prepare a final draft of the prescribed burn plan for the Superintendent's final review and approval.

1. Debris Disposal

Fire may be used to eliminate various types of debris generated from resource management or maintenance activities, such as brush clipping, pruning, and hazard tree removal, according to the guidelines established in NPS-18, Section M, Chapter 5, page 10. Any debris burning or maintenance related open fires will be conducted in accordance with the burning laws of the State they are planned to occur in.

Debris fires may be conducted by persons without wildland fire qualifications as long as: personnel wear personal protective equipment (hard hat, eye protection, leather gloves, nomex shirt and pants, leather boots); qualified personnel are available to respond as needed; at least one member of the crew is qualified at the firefighter level; the park has notified appropriate agencies (local agency cooperator fire departments), park personnel, and neighbors; and developed an appropriate safety and evacuation plan to enact in case of injuries or other emergencies.

c. Prescribed Burn Personnel

Prescribed burns will be executed by qualified personnel. A Burn Boss will be designated for any prescribed burn by NEPE/BIHO with the assistance of the regional NPS FMO and other park cooperators. NEPE/BIHO will participate with nearby parks and cooperating agencies in a coordinated approach to mutual prescribed fire programs.

Some parks and agencies include Grant-Kohrs Ranch National Historic Site, Glacier National Park, Beaverhead/Deer Lodge National Forest, the Wallowa-Whitman National Forest, and the Nez Perce Tribe.

The Prescribed Burn Boss will fill all required positions to conduct the burn with qualified personnel including the Firing Boss, Holding Boss, and Ignition Boss. All personnel listed in the burn plan must be available for the duration of the burn or the burn will not be initiated.

d. Weather and Fire Effects Monitoring

Weather and fuel moisture conditions must be monitored closely in planned burn units to determine when the prescription criteria are met. A belt weather kit may be utilized to augment monitoring. Weather data will be gathered at least 30 days prior to conducting the burn so accurate calculations of the 100 and 1000 hour time lag fuel moisture, energy release component, ignition component, spread component, and burning index can be obtained. Fuel moisture samples of 10, 100, and 1000 hour down and dead logs and of live plants will be monitored each week and percent moisture contents figured to help determine when the prescription criteria are met.

When all prescription criteria are within the acceptable range, the Prescribed Burn Boss will select an ignition date based on current and predicted weather forecasts. All personnel and equipment will be assembled one day prior to the planned ignition date. A thorough briefing will be given by the Prescribed Burn Boss and specific assignments and placement of personnel will be discussed. An updated spot weather forecast will be obtained on the day of ignition and all prescription elements will be rechecked to determine if all elements are still within the approved ranges. If all prescription elements are met, a test fire will be ignited to determine on-site fire behavior conditions as affected by current weather. If conditions are not satisfactory, the test fire will be suppressed and the burn will be rescheduled. If conditions are satisfactory, the burn will continue as planned.

Monitoring of prescribed fires at NEPE/BIHO is intended to provide information for quantifying and predicting fire behavior and its ecological effects on park resources while building a historical dataset. Monitoring measures the parameters common to all fires: fuels, topography, weather, and fire behavior. In addition, ecological changes such as species composition and structural changes will be monitored for several years after a fire. This information will be very useful in fine-tuning the future prescribed burn program.

Monitoring impacts from wildland fires may also be appropriate to provide potentially valuable information regarding fire behavioral information that can feed the future prescribed fire program. During prescribed burns, monitoring can serve as a precursor to invoking suppression action by determining if the fire is in prescription, assessing its overall potential, and determining the effects of the prescribed burn.

Prescribed burn monitoring will include mapping, weather, site and fuel measurements and direct observation of fire characteristics such as flame length, rate of spread and fire intensity. Operational monitoring provides a check to insure that the fire remains in prescription and serves as a basis for evaluation and comparison of management actions in response to measured, changing fire conditions, and changes such as fuel conditions and species composition.

All fires may be monitored regardless of size. Specific fire information guidelines for each fire will be prepared to update intelligence about the fire. Highest priority for monitoring will be assigned to large fires or fires which threaten to cross park site boundaries and/or may impact adjacent property.

The NEPE/BIHO Integrated Resource Manager will assure that assigned qualified personnel are dispatched to monitor fires. Personnel will be dispatched for the length of time there is a need for onsite information on the fire's status. The most efficient utilization of personnel is to specifically train monitoring personnel with experienced fire suppression personnel. By being able to suppress the fire, assess its potential, characterize and quantify its effects, and determine if it is within prescription, an efficient and flexible monitoring program will result.

NEPE/BIHO will use the fire monitoring protocols developed by the Pacific West Region (NPS 1992) and adapted for use in the park. A copy of the Fire Monitoring Handbook is in the Nez Perce National Historical Park Research Center, located at the park Visitor Center in Spalding, Idaho.

e. Prescribed Fire Projects Critique Format

The NEPE/BIHO Fire Analysis Committee and associated park cooperators will critique each prescribed burn. A report detailing the actual burn will accompany any recommendations or changes deemed necessary in the program. This report will be submitted to the NEPE/BIHO Superintendent. A post-season critique of the fire management program, including the prescribed burn program, will be held each year by the Fire Analysis Committee at the conclusion of the fire season.

f. Prescribed Fire Reporting and Documentation

All prescribed burn forms will be completed as outlined by the Prescribed Burn Boss. A fire monitor will be assigned to collect all predetermined information and complete all necessary forms prior to, during, and after the burn. All records will be archived in the NEPE/BIHO fire records for future use and reference.

The Prescribed Burn Boss will prepare a final report on the prescribed burn for the NEPE/BIHO Fire Analysis Committee to review. Information will include a narrative of the burn operation, a determination of whether objectives were met, weather and fire

behavior data, map of the burn area, photographs of the burn, number of work hours, and final cost of the burn.

The forms necessary for documenting prescribed burn activities are outlined in RM-18 (Wildland Fire Management Guideline). The Individual Fire Report, DI-1202 (Appendix J), is the responsibility of the NEPE/BIHO Integrated Resource Manager with input from the Burn Boss. The Case Incident Report, 10-343 (Appendix K), will be completed by the NEPE/BIHO Unit Manager with input from the Burn Boss and Integrated Resource Manager. It will document all personnel and equipment costs involved in the burn.

The NEPE/BIHO Integrated Resource Manager, with assistance from other staff, will be responsible for completing an annual fire summary report. The report will contain the number of fires by type, acres burned by fuel type, cost summary, personnel utilized, and fire effects.

g. Historic Fuel Treatment.

Historic fuel treatments practiced at NEPE/BIHO sites has been restricted to debris burning associated with brush removal, tree trimming, and hazard tree removal. Additional fuel treatments have involved haying or grazing by horses from the Nez Perce Tribe's Young Horseman Program of former agricultural fields near administrative structures or significant cultural sites to reduce cured vegetation at the East Kamiah, Weippe Prairie, White Bird, and Spalding sites.

h. Local Prescribed Burn Requirements

All prescribed fires on NEPE/BIHO park sites will have prescribed burn plans. These actions will be result of a planning process that considers the risk and benefits associated with the application of fire. The plan will be a site specific action plan describing the purpose, objectives, prescription, and operational procedures needed to prepare and safely conduct the burn. The treatment area, objectives, constraints, and alternatives will be clearly outlined. No burn will be ignited unless all prescriptions of the plan are met. Prescribed Burn Plans will follow the format contained in Appendix L.

2. Process When Existing Prescribed Fire Burn Plan is Exceeded

A qualified Incident Commander Type III will be requested in the event of an escaped prescribed burn. If the prescribed burn escapes the predetermined burn area, all further ignition will be halted and suppression efforts as discussed in the pre-burn briefing will be initiated. The regional NPS FMO will be notified immediately of any control actions on a prescribed burn. If the burn exceeds the initial suppression efforts, the burn will be declared a wildland fire and completely suppressed using appropriate techniques. A WFSA will be completed and additional personnel and resources ordered as determined by the Incident Commander. If the fire continues to burn out of control, additional resources will be called from the local cooperating agencies. A management overhead team may be requested to assume command of the fire.

a. Selection of New Strategies - Wildland Fire Situation Analysis (WFSA)

When any of the following conditions occur, the WFSA process will be completed:

- The fire does not meet every element of the Decision Criteria Checklist, or is exceeding management capability and available resources.
- The fire is projected to leave NPS jurisdiction and/or the contingency boundaries, and the adjoining jurisdiction will not/cannot accept management of the fire.
- The regional NPS FMO, with the concurrence of the NEPE/BIHO Superintendent, determines that regional and/or national conditions outweigh potential benefits of the fire and appropriate suppression action is warranted.

Those acres burned after the strategic alternative is changed due to use of the WFSA process will be recorded as acreage from a suppression action. Acres burned before the change in strategy will be counted as prescribed fire use acreage. If a change in strategy occurs, fully qualified suppression personnel will be assigned and suppression action initiated, following the selected alternative defined in the WFSA and within the guidance and restraints contained in the limited delegation of authority issued for that fire.

3. Air Quality and Smoke Management

a. Description of Pertinent Air Quality Issues

There are only incidental air quality issues to consider due to the remoteness and small size of most NEPE/BIHO sites. NEPE/BIHO is a class II air quality area and is in a non-attainment area for ozone. All actions directed under this FMP will be in compliance with the Clean Air Act and State emission standards for open burning. Copies of the State standards are maintained in the Nez Perce National Historical Park Research Center. If regional alerts indicate air particulate levels are already very high, then a delay in ignition may be warranted to protect the health of downwind residents. The Superintendent, in consultation with the Burn Boss, will make the final determination. Smoke management/air quality forecasts can be obtained from the Montana/Idaho State Airshed Group Smoke Monitoring Unit website at www.smokemu.org/ or from the Dillon Dispatch Center for the Montana FMU.

b. Smoke Management Action Program

1. Location of Class I Airsheds

NEPE/BIHO park sites and surrounding environs are designated as class II airsheds and are not subject to the stricter EPA regulations covering class I airsheds.

2. Description of Smoke Sensitive Areas

Depending on the degree and direction of winds encountered during a prescribed burn, there is the potential for residents of several small communities that are located near several NEPE/BIHO sites to experience varying effects from smoke. For the Montana FMU this includes the communities of Wisdom and Jackson, Montana. For the Idaho FMU this includes Asotin and Clarkston, Washington and Lewiston, Lapwai, Kooskia, Orofino, Kamiah, White Bird, Grangeville, Cottonwood, and Weippe, Idaho. For the

Oregon/Washington FMU this includes Asotin, Clarkston and Anatone, Washington, Lewiston, Idaho, and Joseph and Enterprise, Oregon. There are also numerous rural and localized residential areas located amongst the small communities mentioned above near NEPE/BIHO park sites. Due to the small size of all NEPE/BIHO park sites, smoke effects would likely be small scale and short in duration but persons with lung problems or asthma could still be affected. Public service announcements of upcoming prescribed burns in the local radio and/or newspaper will be made to warn residents of potential health effects. In addition, neighbors immediately surrounding any park sites proposed for burning would be notified prior to the actual ignition date.

3. Local and Regional Smoke Management

The Park must comply with state air quality and open burning standards. State and Federal land management agencies in Montana and Idaho have organized on an operational basis and formed the Montana/Idaho Airshed Group. The intent of this group is to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction. Members submit a list of planned burns to the Monitoring Unit in Missoula, Montana. For each planned burn, information is provided describing the type of burn to be conducted, the number of acres, as well as the location and elevation at each site. Burns are reported by "Airshed" (geographical areas with similar topography and weather patterns). The program coordinator and a meteorologist provide timely restriction messages for airsheds with planned burning. They also issue daily decisions which can restrict burning when atmospheric conditions are not conducive to good smoke dispersion. Restrictions may be directed by airshed, elevation, or by special impact zones around populated areas and are announced through airshed-specific regional coordinators.

A detailed operational guide has been produced by the Montana/Idaho State Airshed Group that addresses specific topics such as organization, report procedures, essential winter burning, membership guidelines, compliance processes, complaint procedures, major duties of the coordinators, board and representatives, and operational procedures for complying with Montana and Idaho State air quality regulations. All NEPE/BIHO fire operations will comply with the perimeters provided in this operation guide. A copy of the Montana/Idaho State Airshed Group Operational Guide can be found in the NEPE Resource Center located in the Visitor Center of the Spalding site.

E. Non-Fire Fuel Treatment Applications

1. Mechanical Treatment

Opportunities exist within NEPE/BIHO FMU's to utilize mechanical thinning and mowing of cured and overgrown vegetation in order to reduce potential risks to NPS facilities and adjoining landowners. Mechanical treatments include activities undertaken using equipment or hand tools.

a. Annual Mechanical Treatment Preparation

Prior to any mechanical treatment operations, areas would be identified, significant resources delineated, and methodologies for treatment developed. Surveys to document and record cultural resources, potential wildlife habitat areas, sensitive native plant species, and any T&E species would then be conducted and their locations documented and mapped. These areas would be carefully avoided or could be designated to receive site-specific mechanical treatment efforts to protect them from future wildland and/or prescribed burns. Planning and treatment funding through regional fire funds could then be requested at least 1 year prior to the treatment.

b. Use Restrictions by FMU

Currently there are no identified resource-based restrictions for any of the FMU's. No ESA protected species or their habitats will likely be impacted by these activities. Areas with sensitive natural or cultural resources will be addressed on a case-by-case basis as they are located.

The only potential foreseeable restriction could be associated with the winter months and potential snow loads. This is especially the case with the Montana FMU, but can also be a concern with other NEPE/BIHO FMU's as well. Depending upon the treatment, it can sometimes be difficult to implement mechanical treatments when the sites are snow covered.

c. Effects Monitoring

Areas that are mechanically treated prior to a prescribed burn will have monitoring plots established by a NPS fire effects crew prior to treatment to determine the impacts, cost effectiveness, and results following the established protocols. Effects monitoring for mechanical treatments will be outlined in the monitoring plan.

d. Critiques Format

The NEPE/BIHO Fire Affects Committee (FAC), in consultation with applicable park cooperators, will review the mechanical treatment program in the fall of each year. Recommendations will be advanced to the NEPE/BIHO Integrated Resource Manager for changes to the program and input will be provided on any upcoming projects.

e. Cost Accounting

The NEPE/BIHO Integrated Resource Manager will prepare budget requests and will track all expenditures related to mechanical fuels treatments. He will work directly with regional NPS fire program staff on cost accounting and reporting procedures. Cost accounting will be commensurate with the processes of the benefiting function. Hazard fuel reduction projects will have a fire management funding base, which will be tracked through the appropriate assigned project work codes.

f. Reporting and Documentation

A final report which includes a narrative of the project operation, a determination of whether objectives were met, maps of the treatment site, before and after photos, an

estimate of trees cut and acres treated, number of work hours, final costs, and corresponding GIS data, will be prepared at the end of each field season. This will be reviewed by the NEPE/BIHO FAC and then a condensed report will be forwarded on to the regional NPS FMO office for inclusion in any annual NPS reports.

g. Annual Planned Project List

Please see Appendix M for upcoming planned projects. In many cases the projects listed will be done in stages, with the first stage being mechanical fuels reduction on the site, followed by the second stage, which is a prescribed fire being completed for the treated area or overall burn unit.

V. FIRE MANAGEMENT ORGANIZATION AND BUDGET RESPONSIBILITIES

A. Organizational Structure of the NEPE/BIHO Fire Management Program

Due to the size and staff limitations at Nez Perce National Historical Park and Big Hole National Battlefield, the Park does not have a formalized fire management organization. The Pacific West Region of the NPS fire management staff and FMO provide oversight and assistance as needed.

B. FIREPRO Funding

The Park does not have any FIREPRO funded positions. FIREPRO does fund approved fire, wildland urban interface, and hazard fuel projects. FIREPRO funding is also authorized for approved fire training, preparedness, suppression, equipment, personal protective equipment, and burned area emergency stabilization and rehabilitation projects.

FIREPRO funds are managed through the Pacific Northwest Fire Management Office. Requests for FIREPRO funding can be made from NEPE/BIHO to the Regional FMO.

C. Fire Management Organization

Nez Perce National Historical Park (including Big Hole National Battlefield) has park sites located in four western States (Idaho, Montana, Washington, and Oregon). To facilitate management of those sites the park has identified three staff positions called “Unit Managers” which oversee the day-to-day issues with disperse sites. For the park sites located in Montana, the Superintendent of Big Hole National Battlefield serves as the Unit Manager. The other two positions included the Idaho Unit Manager (responsible for the Idaho based sites) and Oregon/Washington Unit Manager (responsible for those site located in Washington and Oregon).

The specific Unit Manager with responsibility over a particular NEPE/BIHO park site (see Table 10) is responsible for wildland fire preparedness, suppression operations, and coordination on

suppression operations with mutual aid organizations. The NEPE/BIHO Integrated Resource Manager is responsible for fire planning, fire related budgets, prescribed fire use and monitoring, post fire site assessment and restoration. Both positions coordinate with one another and are assisted by other park staff as needed, the NEPE/BIHO Superintendent and the Regional NPS fire program staff on fire and resource management objectives.

Table 10. Nez Perce National Historical Park Unit Manager Responsibility Table

NEPE/BIHO FMU	Park Site	Responsible NEPE/BIHO Unit Manager
Montana	Big Hole National Battlefield	Big Hole National Battlefield Superintendent
Idaho	Canoe Camp	Idaho Unit Manager
	East Kamiah	Idaho Unit Manager
	Spalding	Idaho Unit Manager
	Weippe Prairie	Idaho Unit Manager
	White Bird Battlefield	Idaho Unit Manger
Oregon/Washington	Buffalo Eddy	Oregon/Washington Unit Manager
	Old Joseph Cemetery	Oregon/Washington Unit Manager

The specific fire related duties of NEPE/BIHO staff include the following:

1. Fire Analysis Committee (FAC)

The FAC for NEPE/BIHO will consist of the Integrated Resource Manager, the BIHO Park Ranger, the Chief of Interpretation, Chief of Maintenance for NEPE and BIHO, and park Unit Managers. This committee will meet as needed to review wildland fire threats and situations, coordinate development of the prescribed burn plans, and develop needed revisions to this FMP for presentation to the Superintendent for approval. Guidelines for their work include those established for the Wildland Fire Situation Analysis (WFSA).

2. Superintendent

The Superintendent is responsible for managing wildland fire programs according to Department policy and RM-18. Major duties with regard to wildland fire include:

- Approve the Fire Management Plan and any revisions.
- Approve and implement any fire-related use restrictions.
- Accept sole authority to approve prescribed burn plans.
- Select and approve action alternatives from those developed via the WFSA process.
- Provide overall direction directly to the Incident Commander or Prescribed Fire Burn Boss working in a park area, or designate a representative to do so, as needed.
- Delegate specific authority to the appropriate park staff for mobilizing equipment and personnel.

3. Acting Superintendent

An Acting Superintendent is delegated all decision making responsibility and authority (as described above) when the Superintendent is absent from the park and unavailable for contact.

4. Integrated Resource Manager

The NEPE/BIHO Integrated Resource Manager oversees the fire management program and ensures coordination with cultural and resource management programs. He/she has direct responsibility for oversight of the FMP and any revisions, and for preparedness and fuels management plans. Other major duties related to wildland fire include:

- Conduct reviews of fires as specified in this plan.
- Manage budgets for both allocated and emergency fire accounts.
- Ensures completion of fire reports and other administrative records.
- Ensures Fire Management Plan and Burn Plans meet NEPA, ESA, CWA, NHPA, NPS guidelines and requirements, and any other applicable federal or state laws regulations.
- Prepare yearly and periodic revisions to the FMP, interagency agreements, etc.
- Review prescribed burn objectives. Coordinate establishment of burn monitor plots with the Regions Fire Effects Ecologist. Identify areas of potential benefit from prescribed fire.
- Develop the draft technical components and sections of the prescribed burn plans. Assists the Burn Boss in preparing the approved burn plan, and in implementing the burn plans on schedule as the burn prescriptions are met.
- Inventory, monitor, and stock the fire cache as needed to ensure fire equipment readiness before and during the fire season.
- Inform and consult with Deputy Regional FMO when a wildland fire reaches ten acres.
- Prepare or assist in preparing fire reports, dispatch fire reports, weather information, resource orders, and situation reports as needed.
- Provide review and oversight on debris pile burns and agricultural maintenance burn activities.

5. Unit Managers

The specific NEPE/BIHO Unit Managers has general responsibility over fires occurring at park sites within their administrative control. They also have general responsibility for fire preparedness, insuring cooperating agency agreements are in place and current, coordinating emergency response, and coordination with park neighbors, partner groups, and cooperating agencies. The Unit Managers have the following fire related duties:

- Coordinate with adjacent land managers to establish objectives and priorities on fires involving multiple ownership or jurisdiction.
- Prior to fire season, schedules pre-season meetings with cooperators and updates the lists of contact phone numbers.
- Serve as liaison with other agencies regarding wildland and prescribed fire activities.
- Prepare or assist in preparing fire reports, dispatch fire reports, weather information, resource orders, and situation reports as needed.

- Monitor fire danger conditions, implement step-up plan activities, and recommend appropriate use restrictions.
- Provide assistance in fire prevention and public information and education as described in appropriate sections of this plan.
- Serves as Information Officer for on-going NEPE/BIHO fires

6. BIHO Park Ranger

The Park Ranger stationed at Big Hole National Battlefield serves as the primary on-site contact for fire related issues involving the Montana FMU. The Park Ranger is an assistant to the Integrated Resource Manager for all NEPE/BIHO FMU's and has the following fire related duties:

- Review prescribed burn objectives. Coordinate establishment of burn monitor plots with the Regions Fire Effects Ecologist. Identify areas of potential benefit from prescribed fire.
- Assist in developing draft technical components and sections of the prescribed burn plans. Assists the Burn Boss in preparing the approved burn plan, and in implementing the burn plans on schedule as the burn prescriptions are met.
- Prepare or assist in preparing fire reports, dispatch fire reports, weather information, resource orders, and situation reports as needed.
- Provide review and oversight on debris pile burns and agricultural maintenance burn activities.
- Prepare or assist in preparing fire reports, dispatch fire reports, weather information, resource orders, and situation reports as needed.
- Serve as liaison with other agencies regarding wildland and prescribed fire activities (as designated by applicable Unit Manager).
- Inventory, monitor, and stock the fire cache as needed to ensure fire equipment readiness before and during the fire season.

7. As Assigned - Prescribed Fire Burn Boss

The Burn Boss is responsible for the final technical and logistical components of a prescribed burn plan. The Burn Boss will be assigned through coordination with the Regional NPS FMO and applicable park cooperators. He/she will be asked to make an early summer/spring visit to review the draft burn plan, the proposed prescriptions and burn perimeters, and the recommendations of the FAC. The Integrated Resource Manager will then prepare a review draft of the burn plan for FAC concurrence and park cooperator review. The Burn Boss and Superintendent will approve and sign the final burn plan before it is implemented. The main duties of the Burn Boss related to fire include:

- Determine the defensible burn perimeters, contingency lines, and prescriptions for the prescribed burn.
- Determine the manpower and containment resources needed to complete a safe and successful burn.

- Provide a technical review of the Prescribed Burn plan and all of its major components for technical accuracy.
- Work with the Superintendent on scheduling and completing the burn within the planned prescriptions.
- Lead the pre and post briefings each day of the burn and assign the available resources and personnel to their specific tasks.

8. Administrative Officer

The Administrative Officer manages administrative functions, including personnel, procurement, budget, and phone/computer support. The main duties of the position related to fire management are:

- Provide emergency procurement assistance for on-going fires.
- Provide services in timekeeping, public information, travel, and budgeting for fire management.
- Provide base communications with field fire personnel as needed.

9. As Assigned - Incident Commander

Incident Commanders (of any level) use strategies and tactics as directed by the Superintendent and WFSA, where applicable, to implement selected objectives on a particular incident. A specific Limited Delegation of Authority (Appendix H) will be provided to each Incident Commander prior to assuming responsibility for an incident. Major duties of the Incident Commander, as listed in the NWCG Fireline Handbook, include:

- Brief subordinates, direct their actions, and provide work tools.
- Ensure that safety standards identified in the L.C.E.S., FIRE ORDERS, the Watch Out Situations, and agency policies are followed at all times.
- Personally scout and communicate with others to be knowledgeable of fire conditions, fire weather, tactical progress, safety concerns and hazards, condition of personnel, and needs for additional resources.
- Order resources to implement the management objectives for the fire.
- Inform appropriate dispatch of current situation and expected needs.
- Coordinate mobilization and demobilization with dispatch and the appropriate FMO.
- Perform administrative duties; i.e., approving work hours, completing fire reports for command period, maintaining property accountability, providing or obtaining medical treatment, and evaluating performance of subordinates.
- Assure aviation safety is maintained to the highest standards.

10. Initial Attack Teams

Since NEPE/BIHO maintains no qualified firefighting crews on staff, all Initial Attack support will be requested from local cooperators. The principal of closest forces will guide dispatching, both within the park and in its relationship to cooperators.

For fires located in Idaho (including the Buffalo Eddy site of the Oregon/Washington FMU) the Unit Manager (or Incident Commander) will request outside resources through the Idaho State Lands dispatch for the area, the Nez Perce Tribe, or the Clearwater National Forest. For fires in the Montana FMU, the Beaverhead/Deerlodge National Forest will be contacted, and for fires at the Old Joseph Cemetery site, the Wallowa/Whitman National Forest will be notified. For any fire requiring outside assistance, or that involves special circumstances, the regional NPS FMO will be notified as well.

D. Superintendent's Responsibility to Periodically Assess and Certify Wildland Fire Use

No wildland fire use is permitted at NEPE/BIHO as all wildland fires will be suppressed.

E. Interagency Coordination

NEPE/BIHO currently benefits from the Cooperative Fire Protection Agreement signed between the Bureau of Land Management, the National Park Service, Bureau of Indian Affairs, US Fish and Wildlife Service, US Forest Service, the State of Idaho Department of Lands, and the Nez Perce Tribe. The park also has informal agreements for fire protection with the Nez Perce Tribe and local county and city fire departments. These cooperative relationships are fundamental to the success of the fire program and must continue to receive emphasis. An effort is underway to formalize these understandings in writing through Memoranda of Understanding. An additional agreement exists with Grant-Kohrs Ranch National Historic Site and Glacier National Park for fire supported activities at Big Hole National Battlefield. The Beaverhead/Deer Lodge National Forest also provides cooperative assistance to Big Hole National Battlefield in the form of fire suppression, fire planning, and conducting prescribed fires.

In general, state/county/tribal/federal agency fire programs usually provide initial attack on park fires. The lack of qualified fire personnel within the park, as well as the park's configuration make initial and extended attack capability impractical. Interagency overhead teams may be called upon to manage or assist NEPE/BIHO with initial attack, project fires, or monitoring prescribed burns. The park subscribes to the "closest forces concept", and all contingency plans are jointly formulated at the regional level.

NEPE/BIHO will use the Incident Command System (ICS) as a guide for fireline organization. Qualifications for individuals adhere to NPS Wildland Fire Qualifications and Certification System, part of NIIMS and the National Wildland fire Coordination Group (NWCG) Wildland and Prescribed Fire Qualification Guide (PMS 310-1). Depending on fire complexity, multiple positions may be filled by the same person.

F. Interagency Contacts

See Appendix F for a complete contact list.

G. Fire Related Agreements

See Appendix N for references to the Master Interagency Fire Agreement and those local agreements that are currently in effect.

VI. MONITORING AND EVALUATION

A. Fire Monitoring

Fire monitoring at NEPE/BIHO park sites will take the form of short-term and long-term monitoring.

1. Short-Term Monitoring

Short-term monitoring efforts are divided into three levels of data gathering intensity: 1) reconnaissance, 2) current fire conditions, and 3) post-fire effects.

Reconnaissance monitoring, which provides a basic overview of a fire event, will be used for both prescribed and wildland fires, as they are occurring. Variables mostly commonly monitored at the reconnaissance level include:

- Fire cause, location, and size.
- Fuel and vegetation type.
- Relative fire activity and potential for further spread.
- Current and forecasted weather.
- Resource or safety threats and constraints.
- Smoke volume and movement.

Current fire conditions data will be documented for all fires that have the potential to threaten resource values at risk, or that are being managed under specific constraints such as a prescribed fire. Routine monitoring of current fire conditions calls for data on ambient conditions and fire and smoke characteristics as they change over a 24-hour period. This information will be coupled with that gathered during reconnaissance monitoring, to predict fire behavior and to identify potential problems.

Additional monitoring will be triggered when prescribed or wildland fire actions threaten resource values at risk. For example, if a fire burns through an area known to contain significant cultural resources, follow-up resource surveys will be conducted.

Post-fire effects monitoring will collect information on fuel reduction and vegetative or other objective-dependent variables after a fire. Sampling techniques utilized for this level of monitoring will follow those described in the 1992 Western Region Fire Monitoring Handbook. This level of monitoring allows for a quantitative evaluation of whether a stated objective was achieved, such as the reduction of an unwanted component of a plant community; the removal

of hazardous fuels near NPS structures; or the removal of invading young trees from a specified area.

2. Long-Term Monitoring

Long-term monitoring requires collecting information on trends (change over time) for a managed ecosystem. Once a trend is detected, a research program and appropriate management response can be implemented. By tracking post-fire effects and other variables selected by natural resource and fire research personnel, long-term monitoring will identify the existence of trends. The primary indicators of long-term change will be the variables that are most sensitive to environmental change due to fire.

Annual summaries of NEPE/BIHO fire effects data will be analyzed and interpreted for significant ecological trends. Once a trend is recognized and management has determined that the trend is unacceptable, research proposals and funding requests will be developed to determine the cause of the trend and the mechanism by which it was manifested.

B. NPS Fire Monitoring Handbook

All monitoring protocols utilized at NEPE/BIHO will be based on the NPS Fire Monitoring Handbook and be reviewed and approved at the Regional NPS office level before receiving funding. Monitoring projects will, whenever possible, result in digital data including GIS-compatible datasets.

C. Fire Monitoring Plan (RM-18, Chapter 11)

A fire monitoring plan will be developed for NEPE/BIHO based on chapter 11, of RM-18. The plan will include four cumulatively-linked monitoring levels including environmental planning, fire observations, immediate post-fire effects, and long-term change (see Appendix O for additional information).

VII. FIRE RESEARCH

A. Previous and Ongoing Fire Research

There are no previous or ongoing fire research projects at NEPE/BIHO park sites.

B. Fire Research Needs and Opportunities

Research is a necessary element in the fire management program at NEPE/BIHO. The primary objective of fire research is to provide information for making sound fire management decisions. As the park's FMP is implemented and tested, research needs will inevitably be identified for such purposes as refining prescriptions, improving the understanding of fire behavior and fire

effects, refining monitoring protocols, defining fire return cycles, describing fuels dynamics, describing the impacts on cultural resources, and other information needed for operational fire and resource management. This research will be coordinated through the NEPE/BIHO Integrated Resource Program Manager and if it's determined that significant fire effect/fire exclusion information is needed, park managers will submit request through the annual FIREPRO budget call to fund such research.

VIII. PUBLIC SAFETY

The Park is dedicated to ensuring the safety of each visitor and to all residents and property adjacent to it's boundary with regards to its fire management program. The Superintendent may close all or a portion of a park unit (including roads and trails) when wildland fire or a prescribed burn pose an imminent threat to public safety. A prescribed burn that exceeds prescription or extends beyond the predetermined area will be immediately suppressed.

The park will implement a notification system to inform visitors of all fire activity through normal communication channels. A fire activity report will be updated as significant changes occur to inform Park staff, neighbors, and cooperators of potential fire threat. Areas of fire activity will be clearly signed at visitor centers and park unit bulletin boards. Residents adjacent to the park will be notified in advance of any prescribed burn or wildland fire that poses a threat to burn outside the park's boundaries, through appropriate park personnel.

During prescribed burns at least one burn team member will be currently qualified as an emergency medical technician. A first aid kit will be on-site for prescribed burns as well as wildland fires. The local police, fire, and emergency medical services will be notified prior to the ignition of any prescribed burn. They will also be notified of the location of any wildland fires on Park property.

IX. PUBLIC INFORMATION AND EDUCATION

A. Public Information Coordination for FMP Implementation

Information and education are important processes in public acceptance of the NEPE/BIHO managed fire program. The appropriate Park Unit Manager will coordinate all public information activities with the assistance of NEPE/BIHO interpretive personnel. The Integrated Resource Manager will assist the appropriate Unit Manager in providing accurate information regarding current fire situations and management activities.

The public information program will be developed as follows:

- Concepts of the prescribed burn program will be incorporated, as appropriate, in park publications, brochures, and handouts.
- During prescribed burns, handouts will be prepared and distributed to all visitors entering areas of fire activity.
- The fire management program will be incorporated into visitor contacts, interpretive talks, walks, and tour programs. Particular attention will be given when fires are conspicuous from roads or visitor use areas.
- News releases will be distributed to the media as appropriate.
- The public information outlets of neighboring and cooperating agencies and the regional NPS office will be provided with all fire management information.
- The role of the fire management program at NEPE/BIHO will be developed and discussed, as appropriate, in off-site programs and talks.
- The fire management program will be discussed in informal talks with employees of all Park divisions, contractors, volunteers, neighboring residents, and park cooperators as necessary.

B. Public Information Associated with Escalating Fire Danger

Prior to the lighting of any planned ignition, the Superintendent will make information available to visitors, local residents, and the press about the schedule and reasons for activity. On-site information will be provided to alleviate visitor concern about the apparent destruction of Park resources by fire or the impairment of views due to temporary smoke. This information will include prescribed burn objectives and control techniques, current fire location and behavior, effects caused by the fire, impacts on private and public facilities and services, and restrictions and closures within the Park.

As outlined above, emergency closures or restrictions may become necessary during periods of extreme or extended fire danger.

X. PROTECTION OF SENSITIVE RESOURCES

A. Cultural Resources

There has been extensive archeological and historical research work completed at many NEPE/BIHO sites. However, the potential still exists for significant resources to be uncovered during activities which disturb mineral soils of any of the park sites. One of the objectives of this fire program is to preserve, protect, and in some cases enhance the cultural resources of the park. Therefore, there will be little or no soil disturbance associated with fire suppression or prescribed burn activities.

Examples of significant NEPE/BIHO features and sites consist of cache pits, battlegrounds, burial sites, Nez Perce War related fortifications, rock cairns, traditional campsites, sacred sites, traditional use areas, and so on. In addition, there are historic buildings, ponds, homesteads,

blacksmithing locations, landscape plantings, and other man made historic resources. All cultural resources associated with NEPE/BIHO sites should be considered as eligible for listing on the National Register of Historic Places.

A list of specific cultural resources and some associated concerns is provided in the Cultural Sites Inventory included in this FMP as Appendix P. Fire management in the Park will be consistent with the objective to identify, evaluate, protect and preserve the park's archeological and historical resources, including cultural landscapes.

Fire intensity, duration of heat, heat penetration into the soil, fire line creation, and the use of mechanized equipment for suppression are the primary sources of damage to archeological resources (Anderson 1985). To prevent damage to significant resources the NEPE/BIHO Integrated Resource Manager will consult with additional archeologists, historians, or tribal experts during the early planning stages for prescribed fires. Anderson (1985) recommends the following guidelines which will be utilized by NEPE/BIHO whenever possible for any fire related activity:

- Resource base maps showing archeological and cultural site locations will be given to archeologists and incident commanders on the firelines during project fires or when fires are near known archeological or cultural sites.
- When numerous cultural resources are threatened by a fire, archeologists need to be present to help mitigate fire suppression or rehabilitation impacts on those resources.
- Priority will be given to monitoring mechanized equipment, when used, through all aspects of fire suppression and rehabilitation.
- All archeologists on the fire will hold a current red card and carry standard firefighting safety equipment.
- Special flagging will be used to identify known archeological or historic sites.
- A photographic record will be kept of all fire suppression in archeological areas and of all fire associated archeological activity.
- A liaison officer will coordinate all activities of the archeologists with the Incident Commander.
- Structures listed in Appendix Q of this FMP will receive highest priority for protection from fire.

B. Natural Resources

There are several species of concern that potentially exist on NEPE/BIHO sites, or can be found in rivers and streams adjacent to park sites. With the Montana FMU, the following federally listed and candidate species should be adequately considered during planning and project implementation: Gray wolf (*Canis lupus*), Grizzly Bear (*Ursus arctos horribilis*), Canada Lynx (*Lynx canadensis*), Bald Eagle (*Haliaeetus leucocephalus*), and arctic grayling (*Thymallus arcticus montanus*). Though none of these species have been actively observed within the BIHO site, their presence cannot be completely ruled out.

With the Idaho FMU, No known threatened or endangered animal species have been specifically identified at any of the park sites included in this FMU. However, like the other Park FMU's there are several species of animals that may inhabit the region or are likely present in the adjacent Clearwater River that should be considered when planning and performing fire-related tasks. These include: Gray wolf (*Canis lupus*), Bald Eagle (*Haliaeetus leucocephalus*), Snake River sockeye salmon (*Oncorhynchus nerka*), the fall Chinook salmon (*Oncorhynchus tshawytscha*) and all are federally listed threatened species. In addition, the entire Snake River Basin has been designated as an Evolutionary Significant Unit for the West Coast steelhead (*Oncorhynchus mykiss*).

For the Oregon/Washington FMU one listed plant species, Spalding's Silene or commonly referred to as "Spalding's Catchfly" (*Silene spaldingii*) is potentially present at the Old Joseph Cemetery in northeastern Oregon. The NPS is planning to do a baseline vegetative inventory of this site in the future to determine if this species is present. However, until the plant's presence or absence has been confirmed, all fire-related planning and operations should be performed under the assumption that the plant is present at the site.

Further discussion of the flora and fauna is available at the Nez Perce National Historical Park web address: www.nps.gov/nepe/pphtml/nature.html. Appendix R provides a list of species likely to be found at NEPE/BIHO sites. In addition, Appendix R provides further information regarding potential fire effects on select species that may be found within the park.

Due to the nature of Park, most all NEPE/BIHO sites are small parcels of federal land surrounded by a host of private, state, federal, and tribal lands managed under differing criteria and for different management objectives. Often times this results in the Park lands becoming small islands of habitat that represent a small fraction of a once much larger natural ecosystem. This reality makes the maintenance and longevity of these landscapes that much more vital as small fragments of potential wildlife habitat amongst a sea intensively managed agricultural and timber harvest ground. All fire planning and operations conducted on NEPE/BIHO sites will be directed at maintaining or enhancing the site's habitat potential. For some sites within the park this may not be the primary reason for conducting fire operations, but it should always be a component of the undertaking and results.

Several of the NEPE/BIHO sites contain riparian areas under the park's control. With most sites, the Park doesn't directly manage the actual aquatic resources, but does have management authority over the riparian vegetation located adjacent to the river or stream on Park property. In most cases, these riparian areas have native willow and cottonwoods that provide shade for the stream, provide excellent habitat, and would take many years to replace if damaged. Though short in linear extent because of the small size of most park sites, these riparian zones contribute greatly to the water temperature and quality of rivers and streams flowing by park sites.

Not all riparian areas within the park are in great condition and some may benefit from prescribed fire to remove non-native species that make poor habitat and often times out compete the native tree and shrub community. Careful planning is required when scoping fire operations

on all NEPE/BIHO sites that exhibit a riparian community. Delineation of the community's vegetative composition and native extent should be a significant component of any potential prescribed burn prescription objectives.

C. Modern Infrastructure and Developments

All various park sites located in all NEPE/BIHO FMU have significant historic and modern structures with NPS responsibility present (Appendix Q provides the structural priority list for the Park). Urban-interface mitigation techniques for eliminating and/or reducing potential wildland fire fuel hazards should be applied to prevent or reduce negative impacts to both historic and modern developments within NEPE/BIHO park sites (see Appendix S for additional information on wildland urban interface).

XI. FIRE CRITIQUES AND ANNUAL PLAN REVIEW

According to NPS procedures, all wildland FMPs, including annual burn plans, are required to be reviewed annually with updates approved by the Superintendent. These updates will be conducted in accordance with Chapter 13, in RM-18.

A. Fire Reviews

All fire reviews will be conducted in accordance with RM-18 after each fire event. The review will document what went right with the action and where additional improvement may be needed. This review is helpful because it can be used to identify areas needing improvement through training, changes in procedures, improved communication, or by other means. Each review will be completed by the Incident Commander or NEPE/BIHO Integrated Resource Manager and filed with the final fire report. A copy will be retained by the Park.

After a fire event, the NEPE/BIHO Superintendent will conduct closeout meetings with Incident Management Team(s) (IMT) to ensure a successful transition back to Park management and to identify and evaluate incomplete fire business. A sample IMT closeout can be found in Chapter 13, Exhibit 1 of RM-18.

A regional or national level fire review may be conducted if one of the following occurs:

- Fire crosses Park boundaries into another jurisdiction without the approval of landowner or agency.
- Fire resulted in adverse media attention.
- Fire involved serious injury or death, significant property damage, or has the potential to do so.
- Fire results in controversy involving another agency.

Refer to Chapter 13, Exhibits 2 & 3 of RM-18 for additional information.

B. Annual Fire Summary Report

The NEPE/BIHO Integrated Resource Manager, with input and assistance from other park staff as needed, will be responsible for completing an annual fire summary report. The report will contain the number of fires by type, acres burned by fuel type, cost summary (prescribed burns and wildland fires), personnel utilized, and fire effects.

C. Annual Fire Management Plan Review

The FAC will review the Fire Management Plan annually. Necessary updates or changes will be accomplished prior to the next fire season. Any additions, deletions, or changes will be reviewed by the Superintendent to determine if such alterations warrant a re-approval of the plan.

A formal fire management review will be conducted every five years. Copies of all changes will be promptly forwarded to the Fire Management Program Center. Changes requiring the approval and concurrence will be submitted with a new cover sheet for signature and dates, which will replace the original cover sheet upon receipt by the Superintendent.

XII. CONSULTATION AND COORDINATION

The following agencies, organizations and/or individuals were consulted in preparing the 1999 plan and/or the updates found here.

Bob Chenoweth, Curator, Nez Perce National Historical Park, Spalding, ID

Dave Overcast, Fire Warden, Craig Mountain Forest Protection District, Idaho Department of Lands, Craigmont, ID

Dan Foster, Integrated Resource Manager, Nez Perce National Historical Park, Spalding, Idaho.

Dennis Groseclose, Chief of Maintenance, Nez Perce National Historical Park, Spalding, Idaho.

Doug Eury, Superintendent, Nez Perce National Historical Park, Spalding, Idaho.

Fred Van Horn, Fire Management Officer, Glacier National Park, West Glacier, MT

Jason Lyon, Integrated Resource Manager, Nez Perce National Historical Park, Spalding, Idaho.

Jon James, Superintendent, Big Hole National Battlefield, Wisdom, MT.

Ken Till, Fire Management Officer, Columbia Cascades SSO, National Park Service, Seattle, WA

Richard Smedley, Regional Fire Planner, Columbia Cascades SSO, National Park Service, Portland, OR

Sandy Holt, Fire Management Officer, Nez Perce Tribe, Lapwai, ID

Scott Eckberg, Idaho Unit Manager, Nez Perce National Historical Park, Spalding, Idaho.

Sue Husari, Fire Management Officer, Pacific Northwest Region, National Park Service, Oakland, CA.

Tami DeGrosky, Superintendent, Big Hole National Battlefield, Wisdom, Montana.

Tim Nitz, Oregon/Washington Unit Manager, Nez Perce National Historical Park, Joseph, OR

APPENDIX A: References Cited

Anderson, Hal E. 1978. Graphic Aids for Field Calculation of Dead, Down Forest Fuels. General Technical Report INT-45. USDA Forest Service.

Anderson, Hal E. 1982. Aids to Determining Fuel Models for Estimating Fire Behavior. General Technical Report INT-122. USDA Forest Service.

Anderson, B. A. 1985. Archeological considerations for park and wilderness fire management planning. In Proceedings-Symposium and Workshop on Wilderness Fire, USDA Forest Service, Intermountain Forest and Range Experiment Station General Technical Report INT-182, Ogden, UT. Pp. 145-148.

Arno, S. F. 1976. The historical role of fire on the Bitterroot National Forest. USDA Forest Service, Intermountain Forest and Range Experiment Station Research Paper INT-187, Ogden, UT. 29 p.

Bailey, Robert G. 1995. Description of the ecoregions of the United States. 2d ed. Rev. and expanded (1st ed. 1980). Misc Publ. No. 1391 (rev.), Washington, DC: USDA Forest Service. 108 p. with separate map at 1:7,500,000.

Barrett, S. W. 1981. Relationship of Indian-caused fires to the ecology of western Montana forests. Unpublished thesis, University of Montana Library. 198 p.

Chandler, Craig et. al. 1983. Fire in Forestry. John Wiley & Sons.

Crane, M.F. 1982. Fire ecology of Rocky Mountain Region forest habitat types. Final Report for USDA Forest Service. University of Montana.

Deeming, John E. 1978. The National Fire-Danger Rating System-1978. USDA Forest Service General Technical Report INT-39. 63 p.

Deeming, John E.; Burgan, Robert E.; Cohen, Jack D. 1977. The National Fire Danger Rating System – 1978. Gen. Tech. Report INT-39. USDA Forest Service.

Fischer, William C. and Bruce D. Clayton. 1983. Fire ecology of Montana forest habitat types east of the Continental Divide. Gen. Tech. Rep. INT-141. Ogden, UT: USDA, Forest Service, Intermountain Forest and Range Experiment Station. 83 pp. Brown, James K. 1974. Handbook for Inventorying Downed Woody Material. General Technical Report INT-16. USDA Forest Service.

Fischer, William C., and Charles E. Hardy. 1976. Fire-Weather observers' handbook. USDA Forest Service, Handbook No.494. 52 pp.

Folliott, Peter F.; Clary, Warren P.; Larson, Frederic R. 1977. Effects of a Prescribed Fire in an Arizona Ponderosa Pine Forest. Research Note RM-336. USDA Forest Service.

Fischer, William C. and Anne F. Bradley. 1987. Fire ecology of western Montana forest habitat types. General Technical Report INT-223. Ogden, UT: USDA Forest Service, Intermountain Research Station. 95 p.

Gruell, George E. 1983. Fire and vegetative trends in the Northern Rockies: interpretations from 1871-1982 photographs. Gen. Tech. Rep. INT-158. Ogden, UT: US Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 117 pp.

Harrington, Michael G. 1982. Estimating Ponderosa Pine Fuel Moisture Using National Fire Danger Rating Moisture Values. Research Paper RM-233. USDA Forest Service.

Madany, M.H.; Swetnam, T.W.; West, N.E. 1981. Comparison of Two Approaches For Determining Fire Dates From Tree Scars. In: Forest Science, Vol. 28, No. 4.

Mohr, F. 1988. Light Hand Tactics. USDA Forest Service field guide. US Forest Service, Redmond Training Center, Redmond, Oregon.

National Park Service. 1988. Management Policies. USDI, National Park Service. Chapter 6:7. Fire Management.

National Park Service. 1990. Nez Perce National Historical Park: Additions study. USDI, National Park Service, Pacific Northwest Region. 66 p.

National Park Service. 1990. Wildland Fire Management Guideline, NPS-18. Release No. 3. USDI, National Park Service.

National Park Service. 1995. Resources Management Plan: Nez Perce National Historical Park Idaho, Montana, Oregon, and Washington. USDI, National Park Service, Nez Perce National Historical Park. Unpublished Report. 319 p.

National Park Service. 1997. General Management/Plan Environmental Impact Statement for Nez Perce National Historical Park and Big Hole National Battlefield. USDI, National Park Service.

National Park Service. 1999 Wildland Fire Management Guideline, RM-18. USDI, National Park Service.

Pierce, John R. 1982. A floristic study of the Big Hole National Battlefield. MS Thesis. University of Montana. 265 p.

Rothermel, Richard C.; Deeming, John E. 1980. Measuring and Interpreting Fire Behavior for Correlation with Fire Effects. General Technical Report INT-93.

USDA Forest Service.

Rothermel, Richard C. 1983. How to Predict the Spread and Intensity of Forest and Range Fires. General Technical Report INT-143. USDA Forest Service.

Seaver, David A.; Roussopoulos, Peter J.; Freeling, Anthony N.S. 1983. The Escaped Fire Situation: A Decision Analysis Approach. Research Paper RM-244. USDA Forest Service.

Stockes, M. A. And J. H. Dieterich. 1980. Proceedings of the fire history workshop. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station General Technical Report RM-81. pp 135-137.

US Department of the Interior. Revision 1990. Wildland Fire Suppression and Management. USDI Department Manual, Part 910, Interior Emergency Operations.

US Forest Service. Fire Effects Information System. (A computerized knowledge-based information storage and retrieval system; a file of endemic species at Nez Perce was made in 1996)

Wells, C.G., R.E. Campbell, L.F. DeBano, C.E. Lewis, R.L. Fredriksen, E.C. Franklin, R.C. Froelich, and P.H. Dunn. 1979. Effects of fire on soil. USDA Forest Service. Gen. Ch. Rept. WO-7.

Western Region Prescribed and Natural Fire Monitoring Task Force. 1991. Western Region Fire Monitoring Handbook. National Park Service Publication.

Wright, A.; Bailey, W. 1982. Fire Ecology: United States and Southern Canada. John Wiley & Sons.

Wright, A. 1990. Role of Fire in the Management of Southwestern Ecosystems. In: Effects of Fire Management of Southwestern Natural Resources. General Technical Report RM-191. USDA Forest Service.

APPENDIX B: Definitions

Appropriate Suppression. Selecting and implementing a prudent suppression option to avoid unacceptable impacts and provide for cost-effective action.

Class of Fire (as to size of wildland fires):

Class A - ¼ acre or less.

Class B – more than ¼ but less than 10 acres.

Class C – 10 acres to 100 acres.

Class D – 100 to 300 acres.

Class E – 300 to 1,000 acres.

Class F – 1,000 to 5,000 acres.

Class G – 5,000 acres or more.

Energy Release Component (ERC) A number related to the available energy (BTU) per unit area (square foot) within the flaming front at the head of a fire. It is generated by the National Fire Danger Rating System, a computer model of fire weather and its effect on fuels. The ERC incorporates thousand hour dead fuel moistures and live fuel moistures; day to day variations are caused by changes in the moisture content of the various fuel classes. The ERC is derived from predictions of (1) the rate of heat release per unit area during flaming combustion and (2) the duration of flaming.

Wildland Fire Situation Analysis (WFSA). A decision making process that evaluates alternative management strategies against selected environmental, social, political and economic criteria.

Extended attack. A fire on which initial attack forces are reinforced by additional forces.

Fire management. All activities related to the prudent management of people and equipment to prevent or suppress wildland fire and to use fire under prescribed conditions to achieve land and resource management objectives.

Fire effects. Any consequences to the vegetation or the environment resulting from fire, whether neutral, detrimental, or beneficial.

Fire intensity. The amount of heat produced by a fire. Usually compared by reference to the length of the flames.

Fire prescription. A written direction for the use of fire to treat a specific piece of land, including limits and conditions of temperature, humidity, wind direction and speed, fuel moisture, soil moisture, etc., under which a fire will be allowed to burn, generally expressed as acceptable range of the various fire-related indices, and the limit of the area to be burned.

Fuels. Materials that are burned in a fire; primarily grass, surface litter, duff, logs, stumps, brush, foliage, and live trees.

Fuel loadings. Amount of burnable fuel on a site, usually given as tons/acre.

Hazard fuels. Those vegetative fuels which, when ignited, threaten public safety, structures and facilities, cultural resources, natural resources, natural processes, or to permit the spread of wildland fires across administrative boundaries except as authorized by agreement.

Maintenance burn. A fire set by agency personnel to remove debris; i.e., leaves from drainage ditches or cuttings from tree pruning. Such a fire does not have a resource management objective.

Natural fire. A fire of natural origin, caused by lightning or volcanic activity.

NFDRS Fuel Model. One of 20 mathematical models used by the National Fire Danger Rating System to predict fire danger. The models were developed by the US Forest Service and are general in nature rather than site specific.

NFFL Fuel Model. One of 13 mathematical models used to predict fire behavior within the conditions of their validity. The models were developed by US Forest Service personnel at the Northern Forest Fire Laboratory, Missoula, Montana.

Prescribed fire. A fire ignited by agency personnel in accord with an approved plan and under prescribed conditions, designed to achieve measurable resource management objectives. Such a fire is designed to produce the intensities and rates of spread needed to achieve one or more planned benefits to natural resources as defined in objectives. Its purpose is to employ fire scientifically to realize maximize net benefits at minimum impact and acceptable cost.

Unplanned ignition. A natural fire that is permitted to burn under specific conditions, in certain locations, to achieve defined resource objectives.

Preparedness. Actions taken seasonally in preparation to suppress wildland fires, consisting of hiring and training personnel, making ready vehicles, equipment, and facilities, acquiring supplies, and updating agreements and contracts.

Prevention Activities directed at reducing the number or the intensity of fires that occur, primarily by reducing the risk of human-caused fires.

Rehabilitation (1) Actions to limit the adverse effects of suppression on soils, watershed, or other values, or (2) actions to mitigate adverse effects of a wildland fire on the vegetation-soil complex, watershed, and other damages.

Suppression Actions taken to extinguish or limit the spread of a wildland fire, regardless of the strategies and tactics employed.

Wildland fire Any fire that burns wildland vegetation other than a prescribed fire.

Wildland/urban interface fire A wildland fire that threatens or involves structures.

APPENDIX C: Summary of 1999 NEPA document

Need to complete this

APPENDIX D: Minimum Impact Suppression Tactics

Minimum Impact Suppression Tactics Guidelines Nez Perce National Historical Park/Big Hole National Battlefield

General Discussion

Suppression tactics will have an impact on the landscape. Following the Minimum Impact Suppression Tactics (MIST) guidelines outlined below can reduce the degree of long-term impacts associated with wildland fire suppression tactics. It is important that decision makers are aware of the long-term impacts fire suppression tactics can have on the landscape, and very carefully weigh those long-term impacts to fire suppression safety issues related to wildland fire incidents. The following are MIST standards that will be utilized for NEPE/BIHO sites.

Tactical Standards

- Fireline construction will be minimized by taking advantage of natural barriers, rock outcrops, trails, roads, streams, and other existing fuel breaks.
- Firelines will be the minimum width necessary to halt the spread of the fire and will be placed to avoid impacts to natural and cultural resources vulnerable to the effects of fire and fire suppression activities. Bulldozers and other vehicles may only be used by approval of the NEPE/BIHO Superintendent or if life or structures are threatened.
- Unburned material may be left within the final line
- Clearing and scraping will be minimized
- Archaeological clearance will be obtained prior to fireline construction.

Terminating the Fire

- Where applicable, the route to the fire from the nearest trail or road will be flagged. Flagging will be removed by the last person to leave the area.
- All equipment and debris will be removed from the area for proper disposal.
- Before leaving the fire, rehabilitation will be completed to eliminate impacts from the suppression effort.

Restoration of the Fire Area

- All restoration efforts will be under the supervision of the NEPE/BIHO Integrated Resource Manager or his/her delegate.
- Any cuts will be backfilled and firelines rehabilitated.
- Construct water bars to prevent erosion.
- All burned or dead trees to be removed will be flush cut and lop and scattered in a natural or random arrangement. All fresh cut wood will be covered with soil or darkened by ash.

Retardant Aircraft

- Avoid drops near water sources
- Use water drops where practical

APPENDIX E: Equipment Inventory

Name: Spalding Fire Cache

Location: Maintenance Storage Building, Nez Perce National Historical Park, Spalding Idaho.

Inventory Date: December 2004

Fire Tools		Personal Gear			Support Gear	
#	Item	#	Item	Size	#	Item
5	Shovels	11 total	Nomex Fire Shirts		1	Box MRE
6	Pulaski	2		Small	5	Fusee
4	McLeods	3		Medium	1	Drip torch
2	Fire Swatters	3		Large	7	Strap Canteens
1	Rubber H2O Backpack	3		X-Large	500 ft.	1 ½ hose
		7 total	Nomex Fire Pants		2	Mop-up kits
		2		Waist 32"	2	One gal. gas cans
		1		Waist 34"	1	Two gal. gas can
		2		Waist 36"	3	Fire shelters (pouch)
		1		Waist 38"	1	Web gear
		6 total	Gloves		1	First aid kit (crew)
		2		Medium	7	headlamps
		2		x-large		
		2 total	Hardhats			

Name: Big Hole Fire Cache

Location: Big Hole National Battlefield, Wisdom, Montana.

Inventory Date: January 2005[illegible]

APPENDIX F: Emergency Contact List

	<u>Telephone</u>
1. Fire Dispatch:	
Idaho, Spalding & White Bird	
Craig Mountain Forest Protective District	911
Idaho, East Kamiah & Canoe Camp	
Maggie Creek Forest Protective District	911
Nez Perce National Forest, Grangeville	208/983-4060
US Forest Service Dispatch, Dillon	406/683-3975
Wallow Whitman NF (Joseph)	541/426-4978
2. National Park Service:	
SSO FMO, Sue Vapp	206/220-4257
Glacier NP FMO, Fred Vanhorn	406/888-7822
GRKO Superintendent, Tony Schetzle	406/846-2070
3. US Forest Service:	
Nez Perce NF	208/983-2830
Clearwater NF	208/476-4541
Beaverhead NF	406/832-3178
4. Bureau of Land Management:	
Idaho State Office	208/369-2498
Cottonwood	208/962-3245
Montana State Office	406/654-1240
5. Nez Perce Tribe	208/843-2253
Nez Perce Forest Production	208/843-7235
6. Bureau of Indian Affairs	208/843-7709
7. State of Idaho:	
Craig Mountain Forest Protective District	
Dave Overcast	208/924-5571
Maggie Creek Forest Protective District	
Curt Houston	208/935-2124

8. National Weather Service:

Idaho Fire Weather Forecaster, Rick Ochoa 208/334-9862
Alternate 208/334-9860
FAX 208/334-1660

Montana Fire Weather Forecaster, Zone 107 406/329-4840 (Big Hole Area)
FAX 406/329-4842

Montana Fire Weather Forecaster, Zone 112 406/652-2936 (Bear Paw Area)
Alternate 406/652-2314
FAX 406/652-3214

9. County:

Idaho

Idaho Co. Sheriff 208/983-1100
Lewis Co. Sheriff 208/937-2447
Nez Perce Co. Sheriff 208/799-3131

Montana

Beaverhead Co. Sheriff 406/689-3300
Blaine Co. Sheriff 406/357-3170

10. Aircraft Charter Service:

Idaho

Leading Edge Aviation, Lewiston 208/746-4229
Skywest Airlines, Lewiston 800/221-1212
Horizon Air, Lewiston 800/547-9308
Orofino Aviation, Inc, Orofino 208/476-4714
Stout Flying Service, Inc, Lewiston 208/743-7141 208/924-5497
Valley Helicopter Service, Clarkston 509/758-1900 509/243-4444

Montana

Garlick Helicopters, Inc, Hamilton 406/363-6121
Hamilton Aviation, Hamilton 406/363-3833
Read Air Service, Hamilton 406/363-1180
Dillon Flying Service, Dillon 406/683-5242

9. Hospitals:

Idaho

St. Joseph Regional Med. Center, Lewiston 208/743-2511
Tri-State Memorial Hospital, Clarkston 509/758-5511
Syringa General Hospital, Grangeville 208/983-1700
Clearwater Valley Hospital, Orofino 208/476-4555

Montana

Marcus Daly Mem. Hospital, Hamilton 406/363-2211
Barrett Mem. Hospital, Hamilton 406/683-2323
Norther Montana Hospital, Havre 406/265-2211
Public Health Service, Fort Belnap 406/353-2651

10. Ambulance Service:
Idaho
All areas 911
Montana
Beaverhead Co. 406/689-3113
Blaine Co. 911
11. National Interagency Fire Center:
National Park Service, Rick Gale 208/334-9453
12. Office of Aircraft Services:
Flight Coordination Center 208/389-2765
Aviation Safety Manager 208/334-9682
13. Air Quality:
Idaho
Div. Environmental Quality 208/746-9886
Montana
Dept. Environmental Quality 406/444-9786
14. Electric Companies
Idaho
Idaho County Light & Power Coop.,
Grangeville 208/983-1610
Washington Water Power, Lewiston 208/758-0500
Montana
Vigilante Electric, Dillon 406/683-2327
Montana Power, Havre 406/265-7876 (before 5 pm)
406/265-7811 (after 5 pm)

APPENDIX G: Pre-Attack Checklist

	Year
Command	
Pre-attack WFSAs (if appropriate)	
Pre-positioning needs	
Draft delegation of authority	
Management Constraints	
Interagency Agreements	
Evacuation Procedures	
Structural Protection Needs	
Closure procedures	
Logistics	
ICP, base, camp locations	
Roads, trails (including limitations)	
Utilities	
Medical Facilities	
Stores, restaurants, service stations	
Transportation resources location	
Rental equipment sources (by type)	
Construction contractors	
Sanitary facilities	
Police, fire departments	
Communications (radio, telephone)	
Portable water sources	
Maintenance facilities	
Operations	
Helispot, helibase locations	
Flight routes, restrictions	
Water sources	
Control line locations	
Natural barriers	
Safety zones	
Staging area locations	
Planning	
Park base map	
Topographic maps	
Vegetation/ fuels maps	
Hazard locations (ground and aerial)	
Paleontological/Archaeological/cultural maps	
Endangered species critical habitats	
Sensitive plant populations	
Special visitor use areas	
Land status	

APPENDIX H: Limited Delegation of Authority

Nez Perce National Historical Park

LIMITED DELEGATION of AUTHORITY

To: _____, Incident Commander, _____ Fire

From: Superintendent, Nez Perce National Historical Park

Subject: Delegation of Authority for Fire Suppression

As Superintendent, I am responsible to protect the monument's resources and the lives of its visitors and employees. Your expertise in management of fires will assist me in fulfilling that responsibility during the present emergency situation.

By means of this memorandum I delegate to you the authority to carry out control of the fire or complex of fires named above in accordance with Department of Interior and Park Service policy and guidelines provided in the Agency Administrator's briefing and the wildland fire situation analysis. These documents will provide you with information on the current situation, management objectives and priorities, and constraints necessary to protect the monument's resources. You will find additional guidelines, concerns and constraints, if any, attached. A list of personnel assigned to assist you and of facilities available for use is attached.

Upon the arrival of the entire team, I will conduct an onsite briefing for you and your overhead organization. A fireline briefing will also be conducted by the local fire bosses.

Additional considerations follow.

1. Your first priority at all times is safety of firefighters and the public.
2. My Agency Advisor for you is: _____,
whose title is: _____. He/she has full
authority to act for me in my absence.
3. My Resource Advisor for you is: _____,
whose title is: _____.
4. Consistent with the suppression strategy, minimize environmental impacts.
5. Emergency funds are available, but you should be prepared to make full explanation and provide accountability for any and all expenditures.
6. Dozers and vehicles shall not be used off designated roadways without specific authorization except for a threat to life and habitable or historic structures. Use of aircraft, power saws, pumps, and generators are authorized as needed.

8. I expect you to assume management of the fire by this time: _____
and date:_____.

9. Office of Aircraft Services certified aircraft may be used within the constraints of Department of Interior policy.

10. All firelines will be rehabilitated, according to NPS policy and plans approved by my Resource Advisor.

11. Manage the fire with minimum disruption to visitor access and Park operations, consistent with public safety. You may close areas if necessary for public safety by authority of 36 CFR. You must notify me prior to implementing any closure.

12. Environmentally compatible retardant use must be approved by my Resource Advisor.

13. Incident base, staging areas, helispots, and camp operations will be confined to following location:

•

14. Public information must be closely coordinated with the Unit Manager. The Unit Manager for this Incident is _____, whose contact telephone number is_____.

15. Notify me of any threats to life or property as soon as possible.

16. Emergency suppression funding is available, and all requests for resources should be forwarded to the Pacific West Regional Office Deputy Regional Fire management Officer, John Krausharr at (510) 817-1370.

17. Provide training opportunities for personnel when possible to strengthen our organizational capabilities.

18. A close-out fire analysis and evaluation will be conducted by me or my representative prior to the Incident team departure. I request a 24 hour advance notice of the meeting.

19. Key resource constraints are:

20. Cultural features requiring priority protection are:

21. A determination will be made as to the necessity of rehabilitation of burned areas. If it is determined that rehabilitation of burned areas is necessary then a Burned Areas Emergency Rehabilitation report will be prepared for both short and long term rehabilitation requirements. This report will be submitted within 24 hours of control of the fire.

Superintendent

Date

Incident Commander

Date

APPENDIX I: Wildland Fires Situation Analysis

Need to complete this



(update 12/98 – John Day Fossil Beds

[illegible]

APPENDIX K: Case Incident Report

To be attached

APPENDIX L: Example Burn Plan
NEZ PERCE NATIONAL HISTORICAL PARK



Nez Perce National Historical Park
(NAME OF PROJECT) Project Plan

Approval Signatures:

Prepared by: _____ Date: _____

Name
Position
Agency

Reviewed by: _____ Date: _____

Amanda G. McAdams or Dan Foster
Title
Nez Perce National Historical Park

(Name of Technical Reviewer)
Title
Location

Date: _____

Approved by: _____ Date: _____

Jon James
Superintendent
Big Hole National Battlefield

ON FIRST DAY OF IGNITION:

Accepted by: _____ Date: _____

Burn Boss

Go/ No-Go Checklist

	YES	NO
Is the burn plan complete and approved?		
Are all fire specifications met?		
Is the current and projected fire weather forecast favorable?		
Are all personnel required in the burn plan on site?		
Have all personnel been briefed on the plan requirements?		
Have all the personnel been briefed on safety hazards, escape routes, and safety zones?		
Is all of the required equipment in place and in working order?		
Are available resources available as backup for containment under worst case conditions?		
Have all pre-burn telephone calls and public safety concerns been met?		
Have all mitigation measures for protected resources been met?		
In your opinion, can the burn be carried out according to plan and will it meet the objectives?		
Are you comfortable with the contingency plan?		

If there is a NO response to any of the above questions, the burn will not occur and the problem is solved.

This is a required form and must be completed prior to ignition.

Signature of burn boss

Date

Time

Description of the Prescribed fire area

(Describe overall vegetation)

(Describe specific burn unit)

(Describe historical role of fire)

(Describe airshed, other important factors)

Table 1 lists physical characteristics of the unit.

Figure 1: Map of burn unit

Table 1: Physical description of burn unit

Location:
Size:
Elevation Range:
Slope Range:
Aspect(s):
Description of boundaries:

Goals and objectives

The purpose of this burn is to (list overall/ general objectives)

This burn plan is compliant with the Fire Management Plan and Environmental Assessment for BIHO, signed in March 1999.

The specific objectives for this burn are to:

- 1) (list quantifiable objectives)

Range of acceptable results

Acceptable results for this burn include meeting these resources objectives while doing the following:

- 1) Ensure safety for the public and personnel associated with the fire.
- 2) Eliminate natural and cultural resource damage.
- 3) Limit smoke impacts to neighboring communities.
- 4) Increase public education regarding the role of fire in these ecosystems.
- 5) (any other concerns, e.g., protect grayling habitat)

Project assessment**Complexity**

Table 2 Lists the calculated Complexity rating for the burn. This complexity analysis provides a method to assess the complexity of both wildland and prescribed fires. The analysis incorporates an assigned numeric rating value for specific complexity elements that are weighted in their contribution to overall complexity. The weighted value is multiplied times the numeric rating to provide a value for that item. Then all values are added to generate the total complexity value. Breakpoint values are provided for low, moderate, and high complexity values.

Complexity ratings for each category range from 1 (low complexity) to 5 (high complexity). Descriptions of complexity level ratings can be found in the Fire Management Plan. Weighting values are shown in the table.

Complexity Rating (circle)	Low	40-90
	Moderate	91-140
	High	140-200

Table 2: Complexity Rating

Complexity Element	Weighting Element	Complexity Value	Total Points
Safety	5		
Threats to boundaries	5		
Fuels and fire behavior	5		
Objectives	4		
Management Organization	4		
Improvements	3		
Natural, cultural, social values	3		
Air quality values	3		
Logistics	3		
Political concerns	2		
Tactical operations	2		
Interagency coordination	1		
TOTAL COMPLEXITY POINTS			

Risk Assessment

(summary of potential risks)

Prescribed fire implementation actions

Preburn Considerations

The following will be completed prior to ignition:

- 1) Ensure protection of visitors, employees, and the public. Local media will be informed of the burn prior to ignition.

- 2) The burn boss will be responsible for any holding actions deemed necessary at the time of ignition. Resource advisors will be involved with the construction of any fireline.
- 3) Layout of ignition areas will be precise prior to ignition. Maps will be prepared and be readily available to all personnel. NO ONE will be allowed inside the burn unit area without a proper briefing.
- 4) Helispots will be identified and marked for use as necessary.
- 5) On site weather and spot weather forecasts will be available prior to ignition. These data will assist in all aspects of the burn and will aid in ensuring firefighter safety. This is the burn boss' responsibility.

Briefing

A briefing will be conducted for all fire personnel. This briefing will include distribution of a staffing plan and maps to all individuals working on the fire. Elements of the briefing should include safety, personnel assignments, communications, ignition and holding plans, and description of the contingency plan.

Test Fire

A test fire will be ignited prior to ignition of the entire unit. At the discretion of the burn boss, this test fire may occur as part of the stated ignition sequence. If this test fire is deemed to be burning within prescription, the ignition sequence may continue.

Prescribed Fire Prescription

Table 3 lists the range of acceptable values for key variable in the prescription. Appendix B contains the BEHAVE runs validating these ranges.

Table 3: Prescription parameters

	Day 1		Day 2	
	Acceptable Range	Desired	Acceptable Range	Desired
Fuel Model				
Temperature				
RH				
Mid-Flame Wind Speed				
Slope				
Wind Direction				
1 hr fuel moisture				
10 hr fuel moisture				
100 hr fuel moisture				
Live fuel moisture				
Rate of Spread				

Flame length				
Scorch height				
Spotting distance				

Special Conditions, Public and Personnel Safety

All standard wildland firefighter safety rules will be strictly enforced. Project personnel will wear appropriate personal protective equipment (PPE) during all phases of the project. No person will be allowed into the project area during preparation or execution without the appropriate PPE.

A daily safety briefing will be held prior to work on the project during each phase of the project (see briefing section).

The burn boss and prescribed fire management team will analyze safety concerns such as smoke on main roads, potential health impacts to visitors, and other issues. The burn boss will be responsible for resolving these issues, as appropriate.

The Burn Boss will work with and through appropriate line supervisors to institute any corrective safety measures associated with this project. If a serious safety issue cannot be resolved prior to ignition of any portion of this project, ignition will not take place. If the issue occurs during the execution of the project it will be mitigated with the most reasonable measures possible that will provide for the safety of the public and employees. If necessary, the project will be shut down. The burn boss, (*anyone else?*), and Superintendent have the authority to shut down operations on this project.

Burn Organization

Required positions for this burn include:

1 (List positions here)

Multiple positions may be filled by 1 person where appropriate (e.g., burn boss and ignition specialist). All persons filling the se positions must be NWCG qualified. The Burn boss has the discretion to increase the number of personnel on the fire, as deemed necessary.

Ignition Plan

The proposed ignition for this burn is (give season). Burn duration is expected to be (how many?) days.

The burn will NOT be conducted if any of the following conditions exist:

- 1) Out of prescription dates or conditions of project plan are not met.
- 2) Emergency shutdown necessary.
- 3) Management concerns preclude ignition.
- 4) Local, regional, or national preparedness levels preclude new ignitions.

Firing methods will consist (**DETAIL IGNITION METHOD AND TECHNIQUE**).

All decisions regarding ignitions may be changed on-site, without revision of the burn plan, as long as prescription parameters are met. Topography, fuels, and weather conditions will drive firing techniques that will be employed on a given day. The Burn Boss, Ignition specialist, and Holding specialist will jointly determine techniques to be used.

Holding Plan

Holding actions for this burn will be recommended by the holding specialist and/or burn boss.

No fire line will be constructed without consultation with a resource advisor, where feasible. All efforts will be made to control any slopover or spots with minimal amounts of ground-disturbing activity.

Aircraft may be used to hold portions of the project when holding capabilities are exceeded. No retardant shall be used within the BIHO boundaries without the approval of the Superintendent or designate.

Mop-up will be conducted (**LIST SPECIFICS**).

The holding specialist and burn boss may set up portable water sources, as necessary. Patrols of the fire perimeter will be conducted as determined by the holding specialist and burn boss.

Cooperation

Resources from other Federal Agencies may assist in the planning and implementation of this burn as provided by the National Prescribed Fire Agreement (see the Fire Management Plan).

Contingency Plan

During the life of any portion of this project, prescribed fire activity may threaten the planned fire perimeter through spot fires or slopovers. These types of occurrences are planned for and will not cause the fire to be declared a wildland fire unless the fire activity exceeds the control of the forces available.

(List specific amounts of contingency resources which must be available to burn)

(If appropriate for unit: This fire unit does have a contingency boundary (see Figure 1). This boundary will be utilized as control lines, with the holding specialist having the authority to determine means of attack within these areas. Means of attack on slopovers or spots within the contingency area may include (but are not limited to) the use of burnout activities, water from pumps or helicopters, etc. If line building is deemed necessary within the Battlefield boundaries, a resource advisor must be consulted.)

The holding specialist will supervise all initial attack activities outside the burn perimeter and contingency boundaries. The holding specialist will make recommendations to the burn boss regarding the ability of the forces at hand to suppress these spots and slopovers. If additional holding forces are not readily available and the spots or slopovers threaten life or values at risk, the burn boss, prescribed fire specialist, or superintendent may declare the escape a wildland fire.

Any suppression activities within the Battlefield boundaries must comply with the NEPE Fire Management Plan.

Should the fire burn onto USFS land, the USFS will be notified immediately.

Should the fire burn onto private land, the private landowner will be immediately notified.

Upon conversion to a wildland fire, the Burn boss will notify all personnel on the burn and the IC (as identified in the staffing plan; may be the burn boss if so qualified) will assume control of the fire. Dispatch will be notified immediately of the conversion and appropriate resources will be ordered.

The burn boss will be responsible for ensuring that, when necessary, additional contingency resources are available on the day of the burn or place on standby. This will be based on seasonality of the burn, fuel conditions, and ambient weather conditions.

Funding

Funding for this project is provided through NPS hazard fuel monies. Table 3 shows the money allocated through SACS (NPS budgeting mechanism).

Table 4: Funding

Smoke Management

(Describe airshed)

Smoke will be managed following guidelines outlined in the Fire Management Plan including meeting state regulations, monitoring smoke column height and duration, and recording any complaints received by the local community.

Monitoring

Monitoring for the fire behavior and effects for this burn will follow guidelines outlined in the Fire Management Plan (1999). Fire weather, rate of spread, flame lengths and other fire considerations will be made by a qualified fire behavior monitor.

Monitoring plots will be established in the burn unit prior to the burn. A map of these plots will be attached to the burn plan.

The fire monitor(s) will be directly supervised by the burn boss and will abide by all decisions made by the burn boss.

Post-fire monitoring will be completed as soon as conditions in the burn unit have been determined to be safe.

Post-burn Activities

Patrols will be established by the burn boss and/or holding specialist, as necessary. The burn boss has the responsibility of declaring the fire out.

The staff of BIHO will be responsible for continued public education and interpretation regarding the burn. Notices and press releases will be prepared after the completion of the burn.

Monitoring of the burn will continue following monitoring guidelines stated previously and in the Fire Management Plan.

Appendix A: References
(List)

Appendix B: BEHAVE runs

APPENDIX M: Five Year Plan and Fire Management Unit Maps

This will include:

- 5-year prescribed burn plan – to be updated with FMU maps

APPENDIX N: Agreements with Cooperating Agencies

This includes:

- **BIHO/GLAC/GRKO agreement**
- **Agreement w/Beaverhead Deer Lodge National Forest**
- **Idaho state multiple party fire protection agreement**

APPENDIX O: Monitoring Program

<http://www.nps.gov/fire/fmh/index.htm>

Program Overview

The U.S. National Park Service has developed the Fire Monitoring Handbook, which contains a standardized protocol for monitoring and documenting prescribed fire behavior and effects.

The handbook provides a system to document burning conditions and fire behavior, insure fires remain within certain conditions, verify completion of burn objectives, and follow long-term trends. This information can help managers in burn prescription refinement when objectives are not met or long-term undesirable trends occur, and to identify research needs.

In support of the implementation of the handbook, data forms, software, and training courses have been developed. As the program begins its tenth year, nearly 50 parks with fire management programs have incorporated these protocols into their programs.

FEM 2001 Handbook

Printed copies of the handbook are currently not available. A limited number will be printed this fall. These printed copies are intended primarily for field crew use. Most casual users should download the pdf version and reference it electronically.

[Fire Monitoring Handbook-2001](#) (Adobe PDF 4.445mb)

[Fire Monitoring Handbook-2001](#) (WinZIP 2.992mb)

Interested parties who feel a need for a printed copy of the handbook should contact any of the following individuals:

National Office	Tim Sexton tim_sexton@nps.gov
Alaska Region	Brad Cella brad_cella@nps.gov
Intermountain Region	Linda Kerr linda_kerr@nps.gov
Midwest Region	Jim DeCoster jim_decoaster@nps.gov
Northeast Region	Doug Wallner doug_wallner@nps.gov
Pacific West Region	Paul Reeberg paul_reeberg@nps.gov
Southeast Region	Caroline Lansing caroline_lansing@nps.gov

For further information contact the program manager, Tim Sexton, at:
Tim_Sexton@nps.gov

>>>>>>>>>>NEEDS REVISION<<<<<<<<<<<<<

Those structures with status codes of NR, DOE/NNR or NNR will receive highest priority for protection from fire.

Spalding

The entire Lapwai Creek delta at its confluence with the Clearwater River contains numerous archeological remains dating from as long ago as 11,000 years. There are Nez Perce cemeteries, sites for traditional uses, and archeological remnants of European settlement in and adjacent to the site.

Spalding Cemetery	NNR
Millpond	NNR
Agent's residence	NNR
arboretum	NNR
Spalding Mission site	NNR
Agency cabin	NNR
Watson's Store	NNR
Remnant earthworks	NNR
Irrigation ditch	NNR
Gristmill & millrace	NNR
Sawmill & millrace	NNR

White Bird Battlefield

Battlefield site	NNR
Nez Perce cache pits	NNR
Historic wagon road	NNR
Price property buildings	NNR
Nez Perce burial sites	NNR

East Kamiah

Heart of the Monster	NNR
Liver of the Monster	NNR
Clearwater River crossing point	NNR

Canoe Camp

Location where Lewis and Clark built five canoes in September of 1805 with help of Nez Perce.	NNR
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Big Hole NB

Nez Perce 1877 village site	NNR
Siege area	NNR
Howitzer site	NNR
Sniper trees	NNR
Camas oven/burial site	NNR
Traditional camp site	NNR
Soldier Monument	NNR
Blacksmith location	NNR
Mormon diggings	NNR
Flume footings	NNR
Historic US Forest Service Site	NNR
1889 Monument road	NNR
1915 tourist road	NNR

APPENDIX Q: Structural Protection Priority List

<<<<<<<This needs revision>>>>>>>

Spalding

Visitor Center
Maintenance
Indian Agents residence (“Green House”)
Watson’s Store
Postmaster Home
Indian agency cabin
Restroom

White Bird Battlefield

Interpretive shelter

East Kamiah

Interpretive shelter
Maintenance shed

Big Hole National Battlefield

Visitor Center
Private Residences

Bear Paw Battlefield

Restrooms

APPENDIX R: Species List**AMPHIBIANS**

Rana pretiosa	Spotted frog
Bufo boreas	Western toad

BIRDS

Gavia immer	Common Loon
Aechmophorus occidentalis	Western Grebe
Podiceps nigricollis	Eared Grebe
Podiceps auritus	Horned Grebe
Podilymbus podiceps	Pied-billed Grebe
Ardea herodias	Great Blue Heron
Aix sponsa	Wood Duck
Anas acuta	Northern Pintail
Anas americana	American Wigeon
Anas crecca	Green-winged Teal
Anas cyanoptera	Cinnamon Teal
Anas discors	Blue-winged Teal
Anas platyrhynchos	Mallard
Anas strepera	Gadwall
Aythya affinis	Lesser Scaup
Aythya americana	Redhead
Aythya collaris	Ring-necked Duck
Aythya valisineria	Canvasback
Branta canadensis	Canada Goose
Bucephala albeola	Bufflehead
Bucephala clangula	Common Goldeneye
Bucephala islandica	Barrow's Goldeneye
Chen caerulescens	Snow Goose
Mergus merganser	Common Merganser
Oxyura jamaicensis	Ruddy Duck
Cathartes aura	Turkey Vulture
Pandion haliaetus	Osprey
Accipiter cooperii	Cooper's Hawk
Accipiter gentilis	Northern Goshawk
Accipiter striatus	Sharp-shinned Hawk
Aquila chrysaetos	Golden Eagle
Buteo jamaicensis	Red-tailed Hawk
Buteo lagopus	Rough-legged Hawk
Buteo regalis	Ferruginous Hawk
Buteo swainsoni	Swainson's Hawk
Circus cyaneus	Northern Harrier
Haliaeetus leucocephalus	Bald Eagle
Falco mexicanus	Prairie Falcon
Falco sparverius	American Kestrel

<i>Alectoris chukar</i>	Chukar
<i>Perdix perdix</i>	Gray Partridge
<i>Phasianus colchicus</i>	Ring-necked Pheasant
<i>Bonasa umbellus</i>	Ruffed Grouse
<i>Dendragapus canadensis</i>	Spruce Grouse
<i>Meleagris gallopavo</i>	Wild Turkey
<i>Callipepla californica</i>	California Quail
<i>Callipepla gambelii</i>	Gambel's Quail
<i>Fulica americana</i>	American Coot
<i>Grus canadensis</i>	Sandhill Crane
<i>Charadrius vociferus</i>	Killdeer
<i>Actitis macularia</i>	Spotted Sandpiper
<i>Gallinago gallinago</i>	Common Snipe
<i>Tringa solitaria</i>	Solitary Sandpiper
<i>Phalaropus tricolor</i>	Wilson's Phalarope
<i>Larus argentatus</i>	Herring Gull
<i>Larus californicus</i>	California Gull
<i>Larus delawarensis</i>	Ring-billed Gull
<i>Columa livia</i>	Rock Dove
<i>Zenaida macroura</i>	Mourning Dove
<i>Tyto alba</i>	Barn Owl
<i>Asio flammeus</i>	Short-eared Owl
<i>Asio otus</i>	Long-eared Owl
<i>Bubo virginianus</i>	Great Horned Owl
<i>Glaucidium gnoma</i>	Northern Pygmy-Owl
<i>Otus kennicotti</i>	Western Screech-Owl
<i>Chordeiles minor</i>	Common Nighthawk
<i>Chaetura vauxi</i>	Vaux's Swift
<i>Archilochus alexandri</i>	Black-chinned Hummingbird
<i>Selasphorus rufus</i>	Rufous Hummingbird
<i>Stellula calliope</i>	Calliope Hummingbird
<i>Ceryle alcyon</i>	Belted Kingfisher
<i>Colaptes auratus</i>	Northern Flicker
<i>Picoides pubescens</i>	Downy Woodpecker
<i>Picoides villosus</i>	Hairy Woodpecker
<i>Sphyrapicus thyroideus</i>	Williamson's Sapsucker
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker
<i>Contopus borealis</i>	Olive-sided Flycatcher
<i>Contopus sordidulus</i>	Western Wood-Pewee
<i>Empidonax oberholseri</i>	Dusky Flycatcher
<i>Empidonax traillii</i>	Willow Flycatcher
<i>Sayornis saya</i>	Say's Phoebe
<i>Tyrannus tyrannus</i>	Eastern Kingbird
<i>Tyrannus verticalis</i>	Western Kingbird
<i>Hirundo pyrrhonota</i>	Cliff Swallow
<i>Hirundo rusticola</i>	Barn Swallow

<i>Riparia riparia</i>	Bank Swallow
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow
<i>Tachycineta bicolor</i>	Tree Swallow
<i>Tachycineta thalassina</i>	Violet-green Swallow
<i>Corvus brachyrhynchos</i>	American Crow
<i>Corvus corax</i>	Common Raven
<i>Cyanocitta stelleri</i>	Steller's Jay
<i>Nucifraga columbiana</i>	Clark's Nutcracker
<i>Perisoreus canadensis</i>	Gray Jay
<i>Pica pica</i>	Black-billed Magpie
<i>Parus atricapillus</i>	Black-capped Chickadee
<i>Parus gambeli</i>	Mountain Chickadee
<i>Parus rufescens</i>	Chestnut-backed Chickadee
<i>Sitta canadensis</i>	Red-breasted Nuthatch
<i>Certhia americana</i>	Brown Creeper
<i>Catherpes mexicanus</i>	Canyon Wren
<i>Salpinctes obsoletus</i>	Rock Wren
<i>Troglodytes aedon</i>	House Wren
<i>Troglodytes troglodytes</i>	Winter Wren
<i>Cinclus mexicanus</i>	American Dipper
<i>Regulus calendula</i>	Ruby-crowned Kinglet
<i>Regulus satrapa</i>	Golden-crowned Kinglet
<i>Catharus fuscescens</i>	Veery
<i>Catharus guttatus</i>	Hermit Thrush
<i>Catharus ustulatus</i>	Swainson's Thrush
<i>Ixoreus naevius</i>	Varied Thrush
<i>Myadestes townsendi</i>	Townsend's Solitaire
<i>Sialia currucoides</i>	Mountain Bluebird
<i>Sialia mexicana</i>	Western Bluebird
<i>Turdus migratorius</i>	American Robin
<i>Dumetella carolinensis</i>	Gray Catbird
<i>Anthus spinoletta</i>	Water Pipit
<i>Bombycilla cedrorum</i>	Cedar Waxwing
<i>Bombycilla garrula</i>	Bohemian Waxwing
<i>Lanius excubitor</i>	Northern Shrike
<i>Sturnus vulgaris</i>	European Starling
<i>Vireo gilvus</i>	Warbling Vireo
<i>Vireo solitarius</i>	Solitary Vireo
<i>Dendroica coronata</i>	Yellow-rumped Warbler
<i>Dendroica petechia</i>	Yellow Warbler
<i>Dendroica townsendi</i>	Townsend's Warbler
<i>Geothlypis trichas</i>	Common Yellowthroat
<i>Icteria virens</i>	Yellow-breasted Chat
<i>Oporornis tolmiei</i>	MacGillivray's Warbler
<i>Seiurus noveboracensis</i>	Northern Waterthrush
<i>Vermivora celata</i>	Orange-crowned Warbler

<i>Wilsonia pusilla</i>	Wilson's Warbler
<i>Piranga ludoviciana</i>	Western Tanager
<i>Passerina amoena</i>	Lazuli Bunting
<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak
<i>Chondestes grammacus</i>	Lark Sparrow
<i>Junco hyemalis</i>	Dark-eyed Junco
<i>Melospiza melodia</i>	Song Sparrow
<i>Melospiza lincolni</i>	Lincoln's Sparrow
<i>Passerculus sandwichensis</i>	Savannah Sparrow
<i>Passerella iliaca</i>	Fox Sparrow
<i>Pipilo erythrophthalmus</i>	Rufous-sided Towhee
<i>Pooecetes gramineus</i>	Vesper Sparrow
<i>Spizella arborea</i>	American Tree Sparrow
<i>Spizella breweri</i>	Brewer's Sparrow
<i>Spizella passerina</i>	Chipping Sparrow
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
<i>Aegolius phoeniceus</i>	Red-winged Blackbird
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
<i>Icterus galbula</i>	Northern Oriole
<i>Molothrus ater</i>	Brown-headed Cowbird
<i>Sturnella neglecta</i>	Western Meadowlark
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird
<i>Carduelis pinus</i>	Pine Siskin
<i>Carduelis tristis</i>	American Goldfinch
<i>Carpodacus mexicanus</i>	House Finch
<i>Coccothraustes vespertinus</i>	Evening Grosbeak
<i>Pinicola enucleator</i>	Pine Grosbeak
<i>Passer domesticus</i>	House Sparrow

MAMMALS

<i>Sorex cinereus</i>	Common shrew
<i>Sorex preblei</i>	Preble's shrew
<i>Sorex vagrans</i>	Vagrant shrew
<i>Sorex hoyi</i>	Pygmy shrew
<i>Scapanus orarius</i>	Coast mole
<i>Vulpes Vulpes</i>	Red fox
<i>Canis latrans</i>	Coyote
<i>Ursus americanus</i>	Black bear
<i>Martes americana</i>	Marten
<i>Mustela frenata</i>	Long-tailed weasel
<i>Mustela vison</i>	Mink
<i>Taxidea taxus</i>	Badger
<i>Mephitis mephitis</i>	Striped skunk
<i>Spilogale putorius</i>	Spotted skunk
<i>Lynx canadensis</i>	Lynx
<i>Lynx rufus</i>	Bobcat

<i>Alces alces</i>	Moose
<i>Cervus elaphus</i>	Wapiti
<i>Antilocapra americana</i>	Pronghorn
<i>Odocoileus hemionus</i>	Mule deer
<i>Odocoileus virginianus</i>	White-tailed deer
<i>Glaucomys sabrinus</i>	Northern flying squirrel
<i>Marmota flaviventris</i>	Marmot
<i>Spermophilus lateralis</i>	Golden-mantled ground squirrel
<i>Spermophilus columbianus</i>	Colombian ground squirrel
<i>Tamias amoenus</i>	Yellow-pine chipmunk
<i>Tamias ruficaudus</i>	Red-tailed chipmunk
<i>Tamiasciurus hudsonicus</i>	Red squirrel
<i>Thomomys talpoides</i>	Northern pocket gopher
<i>Castor canadensis</i>	Beaver
<i>Peromyscus maniculatus</i>	Deer mouse
<i>Clethrionomys gapperi</i>	Southern red-backed vole
<i>Microtus montanus</i>	Montane vole
<i>Microtus pennsylvanicus</i>	Meadow vole
<i>Ondatra zibethicus</i>	Muskrat
<i>Erethizon dorsatum</i>	Porcupine
<i>Zapus princeps</i>	Western jumping mouse
<i>Phenacomys intermedius</i>	Heather vole
<i>Lepus americanus</i>	Snowshoe hare
<i>Lepus townsendii</i>	White-sided jack rabbit
<i>Sylvilagus nuttallii</i>	Nuttall's cottontail

REPTILES

<i>Pituophis melanoleucus</i>	Gopher snake
<i>Thamnophis elegans vagrans</i>	Wandering gartersnake
<i>Thamnophis sirtalis parietalis</i>	Red-sided gartersnake
<i>Crotalus viridis</i>	Western rattlesnake

*All species are not found at each site and other species may be present, but have not been reported or documented.

Animal Species

COMMON NAMES:

Sage grouse
Sage hen
Sage chicken

WILDLIFE SPECIES: *Centrocercus urophasianus*

LIFEFORM:

Bird

FEDERAL LEGAL STATUS:

No special status

DISTRIBUTION AND OCCURRENCE

GENERAL DISTRIBUTION:

Sage grouse are distributed from north-central Oregon, southern Idaho, and southern Alberta and Saskatchewan south to eastern California, western Colorado, and extreme western North and South Dakota. Isolated populations occur in New Mexico, where sage grouse were extirpated but have been reintroduced, and in eastern Washington. Sage grouse have been extirpated in British Columbia, most of North and South Dakota, Nebraska, Kansas, Oklahoma, Arizona (except the extreme northwestern tip), and central California.

Western sage grouse occurs only in eastern Washington and Oregon. The ranges of western and eastern sage grouse overlap in Oregon. Eastern sage grouse occur in all states and provinces within the range of sage grouse except Washington.

PLANT COMMUNITIES:

Sage grouse are obligate residents of the sagebrush (*Artemisia* spp.) ecosystem, usually inhabiting sagebrush-grassland or juniper (*Juniperus* spp.)-sagebrush-grassland communities. Meadows surrounded by sagebrush may be used as feeding grounds.

Sage grouse occur throughout the range of big sagebrush (*A. tridentata*), except on the periphery of big sagebrush distribution or in areas where it has been eliminated. Sage grouse prefer mountain big sagebrush (*A. t. ssp. vaseyana*) and Wyoming big sagebrush (*A. t. ssp. wyomingensis*) communities to basin big sagebrush (*A. t. ssp. tridentata*) communities.

Sagebrush cover types other than big sagebrush can fulfill sage grouse habitat requirements; in fact, sage grouse may prefer other sagebrush cover types to big sagebrush. Sage grouse in Antelope Valley, California, for example, use black sagebrush (*A. nova*) cover types more often than the more common big sagebrush cover types. Other sagebrush communities supporting sage grouse include silver sagebrush (*A. cana*) and fringed sagebrush (*A. frigida*). Sage grouse use of less common sagebrush communities (i.e., Bigelow sagebrush [*A. bigelovii*]) may occur but is not documented in current literature.

BIOLOGICAL DATA AND HABITAT REQUIREMENTS

TIMING OF MAJOR LIFE HISTORY EVENTS:

Courtship/nesting - Males gather on the lek in late February to April, as soon as the lek is relatively free of snow. Only a few dominant males, usually two, breed. After mating, the hen leaves the lek for the nesting grounds. Clutch size ranges from six to eight eggs; incubation time is 25 to 27 days. Sage grouse apparently have high rates of nest desertion and nest predation.

Brooding - Chicks fly by 2 weeks of age, although their movements are limited until they are 2 to 3 weeks old. They can sustain flight by 5 to 6 weeks of age. Juveniles are relatively independent by the time they have completed their first molt at 10 to 12 weeks of age.

Seasonal movements - Fall movements to wintering areas are driven by weather conditions and usually occur gradually. After late winter or spring lekking activity, sage grouse may move to higher elevations

or down to irrigated valleys for nesting and feeding. Brooding ranges maybe a considerable distance from winter ranges or spring nesting grounds. Males may also move long distances over the seasons.

PREFERRED HABITAT:

Sage grouse are dependent on sagebrush-dominated habitats. Sagebrush is a crucial component of their diet year-round, and sage grouse select sagebrush almost exclusively for cover. Because sage grouse habitat and cover requirements are inseparably tied to sagebrush, they will be discussed together.

Winter - The best winter habitat is below snowline, where sagebrush is available all winter. Wintering grounds of sage grouse in Idaho were usually where snow accumulation was less than 6 inches (15 cm). In areas of deep snow, sage grouse winter where sagebrush has grown above the snow level. In winter and throughout the year, sage grouse select areas of little or no slope.

Lekking grounds - Open areas such as swales, irrigated fields, meadows, burns, and roadsides and areas with low, sparse sagebrush cover are used as leks. Leks are usually surrounded by areas with 20 to 50 percent sagebrush cover, with sagebrush no more than 1 foot (30.5 cm) tall. When not on the lek, sage grouse disperse to the surrounding areas. Some females probably travel between leks.

Nesting - Sage grouse prefer relatively tall sagebrush with an open canopy for nesting. Hens usually nest near the lekking grounds, but some hens have been noted to fly as far as 12 to 20 miles (19-32 km) to favorable nesting sites. During the nesting season, cocks and hens without nests use relatively open areas for feeding, and roost in dense patches of sagebrush.

Brooding - Sage grouse brood in open sagebrush with a forb component. As the season progresses, they move to areas still containing green vegetation; by August, they are often clustered near permanent watering sites. During summer and early fall, male sage grouse remain segregated from brood and hen flocks, typically remaining with 2 to 3 miles (3.2-4.8 km) of the lek.

FOOD HABITATS:

The importance of sagebrush in the diet of adult sage grouse is impossible to overestimate. Among the big sagebrush subspecies, basin big sagebrush is less nutritious and higher in terpenes than either mountain or Wyoming big sagebrush. Sage grouse prefer the other two subspecies to basin big sagebrush.

Sage grouse lack a muscular gizzard and cannot grind and digest seeds: They must consume soft-tissue foods. Apart from sagebrush, the adult sage grouse diet consists largely of herbaceous leaves, which are utilized primarily in late spring and summer. Sage grouse are highly selective grazers, choosing only a few plant genera. Dandelion (*Taraxacum* spp.), legumes (Fabaceae), yarrow (*Achillea* spp.) and wild lettuce (*Lactuca* spp.) account for most of their forb intake. Insects are a minor diet item for adult sage grouse. Sagebrush made up 71 percent of the year-round diet.

In their first week of life, sage grouse chicks consume primarily insects, especially ants and beetles. Their diet then switches to forbs, with sagebrush gradually assuming primary importance.

Water: Sage grouse apparently do not require open water for day to day survival if succulent vegetation is available. They utilize free water if it is available, however. Sage grouse distribution is apparently seasonally limited by water in some areas. In summer, sage grouse in desert regions occur only near streams, springs, and water holes.

PREDATORS:

Lack of recruitment has been noted in some sage grouse populations, and predation of juvenile sage grouse has been cited as a factor in sage grouse population decline. Lack of adequate nesting and brooding cover may account for high juvenile losses in many regions. A decline in preferred prey may also result in increased predation on sage grouse.

Predator species: Coyote (*Canis latrans*), bobcat (*Lynx rufus*), badger (*Taxidea taxus*), falcons (Falconidae), and hawks, kites, and eagles (Accipitridae) prey on adult and juvenile sage grouse. Crows and ravens (*Corvus* spp.) and magpies (*Pica* spp.) consume juvenile birds. Coyote, ground squirrels (*Spermophilus* spp.), and badger are the most important mammalian nest predators. Among bird species, magpies and ravens commonly prey on sage grouse nests. Sage grouse are a popular game bird. Sage grouse hunting is closely regulated in those states where it is allowed, and is not generally cited as a factor in sage grouse decline.

MANAGEMENT CONSIDERATIONS:

Sage grouse once occurred virtually everywhere there was sagebrush. They have declined primarily because of loss of habitat due to overgrazing, elimination of sagebrush, and land development. Sage grouse populations began declining around 1900, when livestock utilization of sagebrush rangeland was heavy. In the 50's and 60's, land agencies adopted a policy of aggressive sagebrush control in order to convert sagebrush types to grassland. Chaining, frequent fire, and herbicide treatments reduced sagebrush by several million acres and sage grouse numbers plummeted drastically. Conversion of sagebrush types to grassland has since been brought into question as a management practice for both wildlife and livestock. Sage grouse have one of the lowest recruitment rates of any upland game bird in North America.

Sage grouse have used areas planted to crested wheatgrass (*Agropyron cristatum*) as lekking grounds. Given the ability of crested wheatgrass to replace sagebrush and forbs, however, crested wheatgrass plantings are not recommended in sage grouse habitat.

FIRE EFFECTS AND USE

DIRECT FIRE EFFECTS ON ANIMALS:

Fire-related mortality of sage grouse has not been documented in the literature.

HABITAT RELATED FIRE EFFECTS:

Depending on pre-fire habitat quality and the type of fire, fire can be beneficial or harmful to sage grouse. Sage grouse use sagebrush of different age classes and stand structures as lekking, nesting, brooding, and wintering grounds. Neither expansive dense sagebrush nor expansive open areas constitute optimal sage grouse habitat.

Fire that creates a mosaic of sagebrush of different ages and structures would benefit sage grouse. Newly burned areas interspersed with patches of sagebrush offer increased forb production while providing nesting and brooding cover. The younger age classes of sagebrush that establish after fire offer more nutritious and palatable browse than do old sagebrush stands. Additionally, burns provide new lekking sites: Sage grouse have established leks on burns in areas where open cover was lacking before fire. Sage grouse show lek fidelity, however, and may not use burns as lekking grounds if there is a sufficient number of old leks.

FIRE USE:

A diversity of sagebrush habitat, in terms of sage grouse food and cover, should be the management objective. Different patches should be burned each year or every few years, with as long as 20 years between burning each patch.

Lek/nesting grounds - Fire that occurs outside the mating season will probably not affect post-fire sage grouse use of the grounds for mating. Fall wildfires on sage grouse leks in southern Idaho had no effect on sage grouse use of the leks the next breeding season. Areas immediately surrounding leks, however, are heavily used as nesting grounds, and fire in areas surrounding leks may have a negative impact on consequent use of the surrounding areas by hens. Spring fire is not recommended on sage grouse nesting grounds. Fire on the nesting grounds is not recommended if nesting habitat is limited.

Brooding: Fall spot fires burning several patches of a few acres can result in suitable brood rearing areas by increasing forb availability. Spot burns along edges of meadows where sagebrush is encroaching may also enhance brood rearing areas. Enough sagebrush-meadow ecotone must be left, however, to provide cover.

Winter: Winter fires are not recommended.

Sage grouse population size may be cyclic; winter severity is also suspected to affect population size. Habitat alterations other than fire may have played a factor in post-fire sage grouse population size.

Animal Species

COMMON NAMES:

lynx
Canada lynx

WILDLIFE SPECIES: *Lynx lynx*

LIFEFORM:

Mammal

FEDERAL LEGAL STATUS:

Notice of Review, Category 2

DISTRIBUTION AND OCCURRENCE

GENERAL DISTRIBUTION:

The lynx is found in the taiga zone of North America, from British Columbia east to the Atlantic Coast of Canada. It ranges from Alaska south, except for the coastal areas, to isolated parts of Washington, Idaho, and Montana. The lynx is also found in central Utah and in a fraction of Colorado. Small populations may still exist in northern Minnesota, Wisconsin, and New Hampshire.

PLANT COMMUNITIES:

Lynx are associated with dense climax forests at elevations above 4,000 feet (1,200 m). They also use early seral stage communities bordering dense forests. Because their populations are closely tied to snowshoe hare (*Lepus americanus*) numbers, lynx can also be found in second growth forests when hare are numerous. Lynx inhabit hemlock (*Tsuga* spp.)-spruce (*Picea* spp.)-fir (*Abies* spp.) forests in the West and pine (*Pinus* spp.) and birch (*Betula* spp.)-spruce (*Picea* spp.)-fir (*Abies* spp.) forests in the East. They are also found in the taiga region of North America.

BIOLOGICAL DATA AND HABITAT REQUIREMENTS

TIMING OF MAJOR LIFE HISTORY EVENTS:

Breeding age - 1 year

Breeding season - January or February, sometimes into April

Gestation period - 60 days

Birth season - March or April, sometimes May or June

Maximum lifespan - 15 to 18 years in captivity

Lynx populations usually fluctuate in a cycle with snowshoe hare populations, peaking about every 9 to 10 years

PREFERRED HABITAT:

Lynx occur in both dense climax forests and second-growth stands. In Alaska and Canada, they prefer boreal forests, and in the Intermountain West, they prefer spruce (*Picea* spp.)-subalpine fir (*Abies lasiocarpa*) and lodgepole pine (*Pinus contorta*) forests. In Washington, Idaho, and Montana, lynx occur above 4,000 feet (1,200 m) in elevation; in Wyoming, above 6,500 feet (1,900 m); and in Colorado and Utah, above 8,000 feet (2,400 m).

COVER REQUIREMENTS:

Lynx require a mix of early and late seral habitats to meet their food and cover needs. Early seral habitats provide the lynx with a prey base, while mature forests provide denning space and hiding cover. Pockets

of dense forest must be interspersed with prey habitat. Lynx den in rotten logs, beneath tree roots, and in rock crevices.

FOOD HABITATS:

Lynx prey primarily on snowshoe hare. Their diet also includes ducks (*Anas* spp.), upland game birds, especially grouse (*Dendragapus* spp.), and various forest rodents, including squirrels (*Scuirids*, *Spermophilids*). Lynx also feed on deer, moose, and caribou carcasses.

PREDATORS:

Predators of lynx include man, mountain lion (*Felis concolor*), bear (*Ursus* spp.), and other lynx.

MANAGEMENT CONSIDERATIONS:

Lynx can be managed by managing for snowshoe hare, their primary prey. Hare populations increase dramatically following disturbance, particularly fire. As stands become older (about 20 to 30 years old), their benefits to snowshoe hare decrease. Because of the cyclic nature of the population, one management strategy to ensure kitten recruitment would be to put a moratorium on trapping for the 3 years following the declining phase of lynx.

FIRE EFFECTS AND USE

DIRECT FIRE EFFECTS ON ANIMALS:

There is no apparent and probably no significant direct fire-related mortality of lynx.

HABITAT RELATED FIRE EFFECTS:

Because lynx populations oscillate with snowshoe hare populations, fires that create snowshoe hare cover and food generally benefit lynx. Fire may have negative short-term effects by eliminating cover for snowshoe hare and lynx. However, as succession progresses and snowshoe hares become abundant, lynx will benefit. Lynx usually do not cross openings greater than 300 feet (90 m) and use travel corridors with tree densities of 180 stems per acre (450/ha). Therefore, fires that create large openings without leaving travel corridors between pockets of dense forest may be detrimental to lynx.

FIRE USE:

Fire can be used to create early seral habitats that support snowshoe hare, the primary prey for lynx. Pockets of unburned areas, at least 1 to 5 acres (0.4-2 ha), should be left for denning sites. These pockets should border prey habitat. Management units should be designed to provide travel corridors, especially along ridges and saddles, as lynx are more likely to use these areas. A variety of fire types and intensities will create a temporal and spatial pattern of habitat for prey, as well as maintain unburned areas for denning sites.

Animal Species

COMMON NAMES:

elk
wapiti
European red deer
Canadian elk
Eastern elk
Roosevelt elk
Merriam elk
Tule elk
dwarf elk
Manitoban elk
Rocky Mountain elk

WILDLIFE SPECIES: *Cervis elaphus*

LIFEFORM:

Mammal

FEDERAL LEGAL STATUS:

No special status

DISTRIBUTION AND OCCURRENCE

GENERAL DISTRIBUTION:

Elk are most abundantly distributed in the Intermountain West from mid-central British Columbia and Alberta south through the western states to mid-central Arizona and New Mexico. They are also found on the Coast of Washington, Oregon, and northern California, and in scattered transplanted populations in Canada and some eastern and mid-western states.

PLANT COMMUNITIES:

Elk were once distributed across most of North America and inhabited all of the major forest and plains plant communities, except the western deserts and the humid ecosystems of the Southeast. Today elk inhabit primarily forests and mountain grasslands of the West. In the Pacific Northwest elk inhabit the dense spruce (*Picea* spp.) - cedar (*Thuja* spp., *Chamaecyparis* spp.)-hemlock (*Tsuga* spp.) and redwood (*Sequoia sempervirens*) forests. They also inhabit the Tule marshes and grasslands of southern California. Elk can be found in ponderosa pine (*Pinus ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), and mixed conifer forests as well as pinyon (*Pinus* spp.) - juniper (*Juniperus* spp.) woodlands, chaparral, and the western and central grasslands of North America.

BIOLOGICAL DATA AND HABITAT REQUIREMENTS

TIMING OF MAJOR LIFE HISTORY EVENTS:

Mating Season - September through October, may continue into November

Birthing Season - late May or early June; twinning is rare

Gestation - 8 to 8 1/2 months

Age of Maturity - females usually breed 1 1/2 years; young males may not breed due to competition with older males

Lifespan - beyond 20 years; mean life expectancy is about 10 years

Antlers - males only; begin shedding in March and continues into April; males in good condition shed earlier than those in poor condition; younger males usually shed before older males

PREFERRED HABITAT:

Because elk have had an historically wide distribution, their preferred habitat also varies widely. Populations in the mountainous West tend to inhabit coniferous forests associated with rugged, broken terrain or foothill ranges. During summer elk spend most of their time in high mountain meadows in the alpine or subalpine zones or in stream bottoms. Elk may use more open areas during spring and summer because of earlier spring green-up. During hot summer months, elk seek shaded, cool habitats.

COVER REQUIREMENTS:

Elk need cover for protection against heat and extreme cold, as well as hiding and calving cover. Ideal cover is grasslands or meadows interspersed with forests that have large amounts of edge. Elk use of open areas tends to decrease at 110 yards (100 m) from cover. Calving cover requirements vary from place to place and within populations. Security or hiding cover is necessary in places of human disturbance.

FOOD HABITATS:

Elk are ruminant herbivores; their food habits are extremely variable throughout their range. Some elk populations prefer to graze, while others rely more heavily on browse. Grasses and forbs are preferred during spring and early summer, and woody browse is preferred during winter. Elk browse conifers in areas where snow covers other forage. Some important elk foods include: eriogonum (*Eriogonum* spp.), tidy tips (*Layia* spp.), blazing-star (*Mentzelia* spp.), scalebud (*Anisocoma acaulis*), five hook bassia (*Bassia hyssopifolia*), alkalimallow (*Sida hederacea*), black alfalfa (*Medicago sativa*), antelopebitterbrush (*Purshia tridentata*), greasewood (*Sarcobatus vermiculatus*), galleta (*Hilaria jamesi*), knotgrass (*Paspalum distichum*), bigleaf sandwort (*Arenaria macrophylla*), spotted cat's-ear (*Hypochoeris radicata*), buckthorn plantain (*Plantago lanceolata*), trefoil foamflower (*Tiarella trifoliata*), cowparsnip (*Heracleum lanatum*), sedges (*Carex* spp.), wildrye (*Elymus* spp.), maple (*Acer* spp.), huckleberry and blueberry (*Vaccinium* spp.), larkspur (*Delphinium* spp.), western goldthread (*Coptis occidentalis*), lupine (*Lupinus* spp.), penstemon (*Penstemon* spp.), clover (*Trifolium* spp.), wheatgrass (*Agropyron* spp.), brome (*Bromus* spp.), bluegrass (*Poa* spp.), sagebrush (*Artemisia* spp.), ceanothus (*Ceanothus* spp.), current (*Ribes* spp.), and quaking aspen (*Populus tremuloides*).

PREDATORS:

Elk predators include humans, wolves (*Canis lupus*), coyotes (*Canis latrans*), black bears (*Ursus americanus*), grizzly bears (*U. arctos*), and mountain lions (*Felis concolor*).

MANAGEMENT CONSIDERATIONS:

Elk can damage a range from overgrazing, as well as damage tree plantations, crops, orchards, and haystacks. Elk compete with cattle and may completely avoid using pastures grazed by livestock. Elk can suffer from many fungal, bacterial, and viral diseases, including a parasitic meningeal worm (*Parelaphostrongylus tenuis*) carried by white-tailed deer and an arterial worm carried by mule deer.

Elk avoid well-traveled roads from spring through fall. Less well-traveled roads may receive more use, but without tree cover, elk use will diminish within 2,450 feet (750 m).

FIRE EFFECTS AND USE**DIRECT FIRE EFFECTS ON ANIMALS:**

Young calves can be trapped and killed by fire, although losses are probably not significant.

HABITAT RELATED FIRE EFFECTS:

Following fire most preferred elk forage species are enhanced by an increase in nutrients. Elk usually prefer to graze on burned as opposed to unburned sites.

FIRE USE:

Prescribed fire is used routinely to create or enhance elk habitat in many Western states. Historical evidence shows that early Native Americans used fire to attract ungulates. Fire can be used to rejuvenate aspen stands, encourage early spring green-up of grasslands by reducing litter, slow or prevent conifer dominance in important foraging areas, increase palatability of foods, reduce the height of browse species, and stimulate regeneration through sprouting or heats carification of seed. If ranges have much litter, burning is recommended in years with normal or above normal precipitation. In rough fescue grasslands burning should be done soon after spring snowmelt to prevent a possible 3 year reduction of rough fescue.

Animal Species

COMMON NAMES:

Moose
European elk
Shiras moose
Alaskan moose

WILDLIFE SPECIES: *Alces alces*

LIFEFORM:

Mammal

FEDERAL LEGAL STATUS:

no special status

DISTRIBUTION AND OCCURRENCE

GENERAL DISTRIBUTION:

The moose can be found throughout Scandinavia, northern Asia, and northern North America. In North America, the subspecies *gigas* ranges from northwestern British Columbia into western Yukon Territory and throughout most of Alaska. Subspecies *shirasi* can be found in western Wyoming, north and central Idaho, western Montana, southwestern Alberta, southeastern British Columbia, and in isolated areas of Utah, Colorado, and extreme northwestern Washington. Subspecies *andersoni* ranges from northern Minnesota, Wisconsin, and Michigan into western Ontario, west to central British Columbia, and north to eastern Yukon Territory and the Northwest Territories. Subspecies *americana* ranges from Maine and Nova Scotia, west through Quebec and central Ontario, and from Hudson Bay south to the Great Lakes.

PLANT COMMUNITIES:

Moose are found throughout the boreal forests of North America. They inhabit jack pine (*Pinus banksiana*)-balsam fir (*Abies balsamea*) forests mixed with paper birch (*Betula papyrifera*) and quaking aspen (*Populus tremuloides*). They also inhabit white spruce (*Picea glauca*)-black spruce (*P. mariana*) forests mixed with birch (*Betula* spp.) and willow (*Salix* spp.). In the West moose inhabit Douglas-fir (*Pseudotsuga menziesii*)/ ninebark (*Physocarpus malvaceus*) habitat types, with snowberry (*Symphoricarpos albus*), red osier dogwood (*Cornus sericea*) and willow. Moose are also found in grand fir (*Abies grandis*)-Pacific yew (*Taxus brevifolia*) forests and subalpine fir (*Abies lasiocarpa*)-Engelmann spruce (*Picea engelmannii*) types with aspen. Moose use riparian communities and herbaceous bogs. Moose are capable of altering the species composition of plant communities and the overall character of communities through overbrowsing.

BIOLOGICAL DATA AND HABITAT REQUIREMENTS

TIMING OF MAJOR LIFE HISTORY EVENTS:

Mating - September through October Gestation - 8 months

Calving Season - May through June; occasional twinning occurs if females receive more than adequate nutrition.

Lifespan - 20 or more years; average 16 years.

Age of Maturity - capable of reproducing at 16 months; however, females usually produce first calf at 2 to 3 years; moose reach full maturity at 5 or 6 years, with maximum fecundity of 10 to 11 years.

Antlers - only males have antlers, which are shed between November and January.

Home Range - varies from 116 square miles (300 sq km) in Alaska to 8 to 15 square miles (20-40 sq km) in northeastern North America.

PREFERRED HABITAT:

Moose habitat preferences vary with the season. In summer moose can be found in open plant communities where forage is abundant, such as riparian communities and cut-over stands older than 15 years. Moose seem to use bogs and other aquatic areas more frequently in summer and in disproportion to their availability. During winter moose prefer forested areas and move into denser, conifer-dominated forests as the winter progresses. In mountainous areas of the West, moose concentrate at elevations below 3,500 feet (1,067 m) during winter. During summer they move to higher elevations, usually above 5,000 feet (1,524 m). Moose distribution in winter is limited by the availability of woody food plants and by snow conditions, such as depth, density, hardness, and duration.

COVER REQUIREMENTS:

Moose need a variety of habitats from dense coniferous forests to more open aquatic and riparian communities with some cover. Moose seek dense forests during mid to late winter as snows deepen and harden. Cover becomes more essential than forage during winter. For calving, cows need dense cover bordering younger stands which provide substantial food. Cow/calf movements are restricted because calves cannot wade through deep snow.

FOOD HABITATS:

Moose are generalist, ruminant herbivores. Their foods encompass several hundred species worldwide, but moose usually eat about 25 to 30 species in any one locale. Throughout their range in North America, moose most commonly browse on alder (*Alnus* spp.), cottonwood (*Populus* spp.), willow, birch, aspen, and balsam fir. Following is a list of other species frequently found in moose diets: serviceberry (*Amelanchier* spp.), mountain ash (*Sorbus* spp.), bush honeysuckle (*Diervilla* spp.), dogwood, mountain maple (*Acer spicatum*), Rocky Mountain maple (*Acer glabrum*), viburnum (*Viburnum* spp.), current (*Ribes* spp.), ceanothus (*Ceanothus* spp.), huckleberry (*Vaccinium* spp.), cherry (*Prunus* spp.), Pacific yew, and wild sarsaparilla (*Aralia nudicaulis*). Moose also eat various species of mushrooms, sedges (*Carex* spp.), grasses, such as bluegrass (*Poa* spp.) and brome (*Bromus* spp.), lichens (*Peltigera* spp.), and forbs, such as fireweed (*Epilobium* spp.) and lupine (*Lupinus* spp.). Some preferred aquatic species include water horsetail (*Equisetum fluviatile*), burreed (*Sparganium* spp.), and pondweed (*Potamogeton* spp.).

PREDATORS:

Moose predators include humans, wolves (*Canis lupus*), grizzly bears (*Ursus arctos*), and black bears (*U. americanus*).

MANAGEMENT CONSIDERATIONS:

In the past wildlife managers have assumed that clearcuts were beneficial to moose because such cuts favor abundant browse production. In general this is true; however, moose require at least some cover during every season and usually will not venture into large, open areas with no hiding cover.

FIRE EFFECTS AND USE

DIRECT FIRE EFFECTS ON ANIMALS:

Occasionally moose are trapped and killed by fire.

HABITAT RELATED FIRE EFFECTS:

An extensive review of the literature indicates that fire generally enhances moose habitat by creating and maintaining seral communities, and is considered beneficial to moose populations. The beneficial effects of fire on habitat were estimated to last less than 50 years, with moose density peaking 20 to 25 years following fire.

FIRE USE:

In willow-birch-aspen forest types, burning every 15 to 20 years will increase forage production for moose and maintain a vegetation height of about 9 feet (3 m), which is within foraging reach of moose. Spring or early summer burning allows for some forage regrowth in the same year. Late summer or fall burning in northern latitudes will delay forage regrowth until the following spring, reducing winter food. Areas where forage species are killed by fire must be seeded, which delays browse production by 3 to 5 years. Fires can be used to intersperse new and old growth cover, and increase the edge effect. A variety of plant communities should be burned to provide immediate and long-term browse, as well as a diversity of forage species. Dense coniferous forests must always be maintained adjacent to more open areas with high forage production. Openings should be no larger than 40 to 50 acres (16-20 ha) in areas of dense cover and less in more open habitats.

APPENDIX S: Wildland Urban Interface

>>>>>>>>>>NEED TO UPDATE THIS>>>>>>>>>>>>>>>>>>>

Definition

The National Fire Plan defines “wildland urban interface” as “an area where structures and other human development meet or intermingle with undeveloped land”.

Purpose of Program

The purpose of the wildland urban interface program is to modify fuel loadings around communities and residences in a manner that would create a zone of defensible space for fire fighters in the event of a wildland fire event.

The reason for modification of fuel loadings, or reduction of hazardous fuels, is based on the concept of changing the fuels configurations thereby modifying fire behavior to a condition that is more conducive to successful suppression efforts or creates a relative safe zone around areas of concern.

Monument Urban Interface

Due to the remoteness of the three Units of the Monument, there are currently no urban interface areas that have been identified or addressed in this FMP.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
INCIDENT RECORD

PARK

NAME: Nez Perce National Historical Park

FORM 10-343

VERSION 08.05.93

INCIDENT

Incident Number:

Incident Date:

Month: Day: Year:

Incident Time:

Hour: Min:

Report Date used as
Incident Date?☐ Yes ☒ NoClearance Code
(Please Choose One)☐ A – Cleared By Arrest/Citation☐ E – Cleared Exceptionally☒ C – Closed (All Other Reasons)☐ F – Found/Rescued☐ N – Not Found/Not Rescued☐ O – Open☐ S – Suspended☐ T – Transferred To Other Agency☐ U – Unfounded☐ W – Warrant Issued

If "Cleared Exceptionally"

☐ A – Death Of Offender☐ C – Extradition Denied☐ E – Juvenile/No Custody☐ B – Prosecution Denied☐ D – Victim Refused To CooperateExceptional
Clearance Date:

Mo Day Year

Primary Agency: ☐ N – NPS ☐ P – Park Police ☐ O – Other Agency _____

Reporting Officer ID _____

OFFENSEPrimary Location Spalding Green House

Offense/Incident Codes

- - -

- - -

- - -

- - -

Description of Offense/Incident

Workplace Injury

*A/C

Location

Code

Location

Type

11 (Gov't/Public Building)

[Click Here For Options](#)[Click Here For Options](#)[Click Here For Options](#)[Click Here For Options](#)

*A = Attempted C = Completed

Type Of Hate Crime Bias?

☐ 88 - None☐ 99 - Unknown☐ Other (Anti-_____)

Method Of Entry (If Burglary)?

☐ Force☐ No Force

Number of premises entered if location is a hotel/motel/lodging: _____

Offender suspected of using:

☐ Alcohol☐ Computer Equipment☐ Drugs/Narcotics

Type of Criminal Activity (May Choose Up To Three):

☐ B – Buy/Receive☐ D – Distribute/Sell☐ O – Operate/Promote/Assist☐ T – Transport/Transmit/Import☐ C – Cultivate/Manufacture/Publish☐ E – Exploit Children☐ P – Possess/Conceal/Abandon☐ U – Use/Consume

Type of Weapon/Force Involved (May Choose Up To Three):

Type Code	Quantity
Click Here For Options	
Click Here For Options	
Click Here For Options	

COMPLAINANT/WITNESS☐ Use Supplemental Complainant/Witness Sheet if more than one complainant/witness☐ Use Crime Victim Sheet if a crime victim is involved☐ Complainant☐ Witness

Name (LAST, First, Middle:

Date Of Birth:

Phone (Business):

Address:

City:

State:

Zip:

Phone (Home):

RANGER

Name of Investigator Notified:

Date:

Time:

Reporting Officer's Name:

Supervisor's Name:

Reporting Officer's Signature:

Date:

Supervisor's Signature:

Date:

SUPPLEMENTAL COMPLAINANT/WITNESS SHEET

FORM 10-343
VERSION 08.05.93

Incident Number:

<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
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<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
<input type="checkbox"/> Complainant <input type="checkbox"/> Witness	Name (LAST, First, Middle):	Date Of Birth:	Phone (Business):
Address:		City:	State: Zip: Phone (Home):
Reporting Officers Name:		Supervisor's Name:	
Reporting Officer's Signature:		Date:	Supervisor's Signature: Date:

Narrative Sheet

Form 10-343
Version 06.25.93

Incident Number: 9370-04-0005

☐ Supplemental Sheet Used (If more narrative

Narrative:

NARRATIVE

Reporting Officer's Name:

Supervisor's Name:

Reporting Officer's Signature:

Date:

Supervisor's Signature:

Date:

FORM 10-343
Version 08.05.93

Incident Number:																														
Type Of Victim (Please Choose One): <input type="checkbox"/> B - Business <input type="checkbox"/> G - Government <input type="checkbox"/> O - Other <input type="checkbox"/> F – Financial Institution <input type="checkbox"/> I - Individual <input type="checkbox"/> R – Religious Organization <input type="checkbox"/> U - Unknown																														
Victim's Name (LAST, First, Middle):		SSN:	Phone (Residence):	Phone (Business):																										
Address:		City:	State:	Zip:	Age: Sex:																									
Race: <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Unknown <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> White <input type="checkbox"/> Black																														
Victim Was NPS Ranger/Park Police? <input type="checkbox"/> N – NPS Ranger <input type="checkbox"/> P – US Park Police		Residence In Jurisdiction: <input type="checkbox"/> N – Non Resident <input type="checkbox"/> R - Resident <input type="checkbox"/> - Unknown																												
Offense/Incident Codes Connected With Victim: <table border="0"><tr><td><input type="text"/></td><td>-</td><td><input type="text"/></td><td>-</td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td>-</td><td><input type="text"/></td><td>-</td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td>-</td><td><input type="text"/></td><td>-</td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td>-</td><td><input type="text"/></td><td>-</td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td>-</td><td><input type="text"/></td><td>-</td><td><input type="text"/></td></tr></table>						<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
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Type of Injury (May Choose Up To Five): <table border="0"><tr><td><input type="checkbox"/> B – Apparent Broken Bones</td><td><input type="checkbox"/> O – Other Major Injury</td></tr><tr><td><input type="checkbox"/> M – Apparent Minor Injury</td><td><input type="checkbox"/> I – Possible Internal Injury</td></tr><tr><td><input type="checkbox"/> T – Loss Of Teeth</td><td><input type="checkbox"/> L – Severe Laceration</td></tr><tr><td><input type="checkbox"/> N – None</td><td><input type="checkbox"/> U – Unconsciousness</td></tr></table>						<input type="checkbox"/> B – Apparent Broken Bones	<input type="checkbox"/> O – Other Major Injury	<input type="checkbox"/> M – Apparent Minor Injury	<input type="checkbox"/> I – Possible Internal Injury	<input type="checkbox"/> T – Loss Of Teeth	<input type="checkbox"/> L – Severe Laceration	<input type="checkbox"/> N – None	<input type="checkbox"/> U – Unconsciousness																	
<input type="checkbox"/> B – Apparent Broken Bones	<input type="checkbox"/> O – Other Major Injury																													
<input type="checkbox"/> M – Apparent Minor Injury	<input type="checkbox"/> I – Possible Internal Injury																													
<input type="checkbox"/> T – Loss Of Teeth	<input type="checkbox"/> L – Severe Laceration																													
<input type="checkbox"/> N – None	<input type="checkbox"/> U – Unconsciousness																													
If Justifiable Homicide (Please Choose One From Each Of The Below): <input type="checkbox"/> 21 – Criminal Killed By Police Officer <input type="checkbox"/> 20 – Criminal Killed By Private Citizen <input type="checkbox"/> C – Criminal Attacked By A Civilian <input type="checkbox"/> B – Criminal Attacked Officer, Killed By Another Officer <input type="checkbox"/> A – Criminal Attacked Officer, Officer Kills Criminal <input type="checkbox"/> D – Criminal Attempted Flight From A Crime <input type="checkbox"/> E – Criminal Killed In Commission Of A Crime <input type="checkbox"/> F – Criminal Resisted Arrest <input type="checkbox"/> G – Unable To Determine/Not Enough Information		If Aggravated Assault/Murder And Non Negligent Manslaughter (Choose Up To Two): <input type="checkbox"/> 01 - Argument <input type="checkbox"/> 02 – Assault On Law Enforcement Officer <input type="checkbox"/> 03 – Drug Dealing <input type="checkbox"/> 04 - Gangland <input type="checkbox"/> 05 – Juvenile Gang <input type="checkbox"/> 06 – Domestic Violence <input type="checkbox"/> 07 – Mercy Killing (Not Aggravated Assault) <input type="checkbox"/> 08 – Other Felony Involved <input type="checkbox"/> 09 – Other Circumstances <input type="checkbox"/> 10 – Unknown Circumstances		If Negligent Manslaughter (Please Choose One): <input type="checkbox"/> 30 – Child Playing With Weapon <input type="checkbox"/> 31 – Gun Cleaning Accident <input type="checkbox"/> 32 – Hunting Accident <input type="checkbox"/> 33 – Other Negligent Weapon Hand <input type="checkbox"/> 34 – Other Negligent Killings																										
Suspect Name:	Sex:	Age:	Relationship Of Victim To This Suspect:																											
N/A																														
Relationship Codes: AQ – Acquaintance ER – Employer NE – Neighbor SE – Spouse BE – Babysittee (The Baby) XS – Ex-Spouse OF – Other Family Member SC – Stepchild BG – Boyfriend/Girlfriend FR – Friend OK – Otherwise Knows SP – Stepparent CH – Child GC – Grandchild PA – Parent SS – Stepsibling (Stepsister/Brother) CF – Child Of Boyfriend/Girlfriend GP – Grandparent RU – Relationship Unknown ST – Stranger CS – Common-Law Spouse HR – Homosexual Relationship SB – Sibling (Brother or Sister) VO – Victim Was Offender EE - Employee IL – In-Law																														
Reporting Officer's Name:		Supervisor's Name:																												
Reporting Officer's Signature:	Date:	Supervisor's Signature:		Date:																										

EVIDENCE SHEET

FORM 10-343
Version 06.25.93

Incident Number:

Number Of Booby Traps:

Number of Clandestine Labs Seized:

Number Of Indoor Marijuana Operations Seized:

DRUG EVIDENCE

Drug Type (Please Choose One):

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> L – Amphetamines/Methamphetamines
<input type="checkbox"/> N – Barbiturates
<input type="checkbox"/> B – Cocaine
<input type="checkbox"/> A – Crack Cocaine
<input type="checkbox"/> C – Hashish | <input type="checkbox"/> D – Heroine
<input type="checkbox"/> I – LSD
<input type="checkbox"/> E – Marijuana
Value Of Plants: \$ _____
Sensimellia? <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> F - Morphine
<input type="checkbox"/> G - Opium
<input type="checkbox"/> O – Other Depressants
<input type="checkbox"/> P – Other Drugs
<input type="checkbox"/> K – Other Hallucinogens | <input type="checkbox"/> H – Other Narcotics
<input type="checkbox"/> M – Other Stimulants
<input type="checkbox"/> J – PCP
<input type="checkbox"/> U – Unknown Drug Type |
|---|--|---|---|

Type Of Criminal Activity For This Drug (Select Up To Three Types Of Criminal Activity Related To This Drug From Among Those Previously Selected For "Offense")

- | | | |
|--|--|--|
| <input type="checkbox"/> B – Buy/Receive
<input type="checkbox"/> C – Cultivate/Manufacture/Publish
<input type="checkbox"/> D – Distribute/Sell | <input type="checkbox"/> E – Exploit Children
<input type="checkbox"/> O – Operate/Promote/Assist
<input type="checkbox"/> P – Possess/Conceal/Abandon | <input type="checkbox"/> T – Transport/Transmit/Import
<input type="checkbox"/> U – Use/Consume |
|--|--|--|

Description:

Quantity:	Measurement Unit:	Quantity Returned To Owner:
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Quantity Destroyed:	Evidence Location:	Other Distribution Of Evidence:
---------------------	--------------------	---------------------------------

DRUG EVIDENCE

Drug Type (Please Choose One):

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> L – Amphetamines/Methamphetamines
<input type="checkbox"/> N – Barbiturates
<input type="checkbox"/> B – Cocaine
<input type="checkbox"/> A – Crack Cocaine
<input type="checkbox"/> C – Hashish | <input type="checkbox"/> D – Heroine
<input type="checkbox"/> I – LSD
<input type="checkbox"/> E – Marijuana
Value Of Plants: \$ _____
Sensimellia? <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> F - Morphine
<input type="checkbox"/> G - Opium
<input type="checkbox"/> O – Other Depressants
<input type="checkbox"/> P – Other Drugs
<input type="checkbox"/> K – Other Hallucinogens | <input type="checkbox"/> H – Other Narcotics
<input type="checkbox"/> M – Other Stimulants
<input type="checkbox"/> J – PCP
<input type="checkbox"/> U – Unknown Drug Type |
|---|--|---|---|

Type Of Criminal Activity For This Drug (Select Up To Three Types Of Criminal Activity Related To This Drug From Among Those Previously Selected For "Offense")

- | | | |
|--|--|--|
| <input type="checkbox"/> B – Buy/Receive
<input type="checkbox"/> C – Cultivate/Manufacture/Publish
<input type="checkbox"/> D – Distribute/Sell | <input type="checkbox"/> E – Exploit Children
<input type="checkbox"/> O – Operate/Promote/Assist
<input type="checkbox"/> P – Possess/Conceal/Abandon | <input type="checkbox"/> T – Transport/Transmit/Import
<input type="checkbox"/> U – Use/Consume |
|--|--|--|

Description:

Quantity:	Measurement Unit:	Quantity Returned To Owner:
-----------	-------------------	-----------------------------

Quantity Destroyed:	Evidence Location:	Other Distribution Of Evidence:
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OTHER EVIDENCE

☐ Supplemental Sheet used (if more than two evidence items):

Description:

Quantity:	Measurement Unit:	Quantity Returned To Owner:
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Quantity Destroyed:	Evidence Location:	Other Distribution Of Evidence:
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OTHER EVIDENCE

☐ Supplemental Sheet Used (if more than two evidence items):

Description:

Quantity:	Measurement Unit:	Quantity Returned To Owner:
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Quantity Destroyed:	Evidence Location:	Other Distribution Of Evidence:
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Reporting Officer's Name:

Supervisor's Name:

Reporting Officer's Signature:

Date:

Supervisor's Signature:

Date:

SUSPECT/ARRESTEE INFORMATION SHEET

FORM 10-343
Version 06.11.93

Incident Number:

**SUSPECT
VEHICLE**

Model Year:	Make:	Model:	Color:	License Plate/Registration:
State:	Reg.Yr.:	VIN:	Vessel Name:	Comments:
Body Style: <input type="checkbox"/> Airplane <input type="checkbox"/> Boat <input type="checkbox"/> Motorscooter/Moped <input type="checkbox"/> Snowmobile <input type="checkbox"/> Van <input type="checkbox"/> ATV <input type="checkbox"/> Camper/RV <input type="checkbox"/> Other <input type="checkbox"/> Tractor-Trailer(s) <input type="checkbox"/> Automobile <input type="checkbox"/> Cross Country Bus <input type="checkbox"/> Pickup Truck <input type="checkbox"/> Truck (Single Unit) <input type="checkbox"/> Automobile And Trailer(s) <input type="checkbox"/> Motorcycle <input type="checkbox"/> School Bus <input type="checkbox"/> Truck And Trailer(s)				

SUSPECT

Suspect Was: <input type="checkbox"/> A - Arrested <input type="checkbox"/> C - Cited/Charged <input type="checkbox"/> W - Warned	Date Of Birth:	Month:	Day:	Year:	Age/Range Of Age:	Sex:
Suspect's Name:			Alias:		Social Security Number:	
Suspect's Address:			City:	State:	Zip:	Phone (Business):
Race: Click Here For Options			Height:	Weight:	Eye Color:	Phone (Residence):
Clothing Description/Other Comments:						
Scars/Marks/Tattoos:			Driver's License Number:		State:	Warrant? <input type="checkbox"/> Yes <input type="checkbox"/> No

ARRESTEE

Arrest/Citation Date: Month: Day: Year:	Type Of Arrest: <input type="checkbox"/> O - On Scene <input type="checkbox"/> S - Summoned/Cited <input type="checkbox"/> T - Taken By Warrant	Primary Arrest/ Citation Offense: - - -	Armed With (Select Up To Two): Click Here For Options Click Here For Options
Disposition Of Subject If Under 18: <input type="checkbox"/> H - Handled Within Department <input type="checkbox"/> R - Released To Other Authority	Multiple Clearance Indicator: <input type="checkbox"/> C - Multiple Count Arrestee <input type="checkbox"/> M - Multiple Counted Elsewhere <input type="checkbox"/> N - Not Multiple	Resident In Jurisdiction: <input type="checkbox"/> N - Non-Resident <input type="checkbox"/> R - Resident <input type="checkbox"/> U - Unknown	
Violation Notices:			

SUSPECT

Suspect Was: <input type="checkbox"/> A - Arrested <input type="checkbox"/> C - Cited/Charged <input type="checkbox"/> W - Warned	Date Of Birth:	Month:	Day:	Year:	Age/Range Of Age:	Sex:
Suspect's Name:			Alias:		Social Security Number:	
Suspect's Address:			City:	State:	Zip:	Phone (Business):
Race: Click Here For Options			Height:	Weight:	Eye Color:	Phone (Residence):
Clothing Description/Other Comments:						
Scars/Marks/Tattoos:			Driver's License Number:		State:	Warrant? <input type="checkbox"/> Yes <input type="checkbox"/> No

ARRESTEE

Arrest/Citation Date: Month: Day: Year:	Type Of Arrest: <input type="checkbox"/> O - On Scene <input type="checkbox"/> S - Summoned/Cited <input type="checkbox"/> T - Taken By Warrant	Primary Arrest/ Citation Offense: - - -	Armed With (Select Up To Two): Click Here For Options Click Here For Options
Disposition Of Subject If Under 18: <input type="checkbox"/> H - Handled Within Department <input type="checkbox"/> R - Released To Other Authority	Multiple Clearance Indicator: <input type="checkbox"/> C - Multiple Count Arrestee <input type="checkbox"/> M - Multiple Counted Elsewhere <input type="checkbox"/> N - Not Multiple	Resident In Jurisdiction: <input type="checkbox"/> N - Non-Resident <input type="checkbox"/> R - Resident <input type="checkbox"/> U - Unknown	
Violation Notices:			

Reporting Officer's Name:		Supervisor's Name:	
Reporting Officer's Signature:	Date:	Supervisor's Signature:	Date:

PROPERTY SHEET

FORM 10-343
Version 08.05.93

Incident Number:

Forms Attached:

☐ Evidence ☐ Vehicle Inventory/Impound ☐ Property Receipt

[illegible]

Type Of Property Loss/Recovery:	Property Description Codes:		
1 – None	01 – Aircraft	15 – Construc/Indust Equip	29 – Structure-Single Occupancy
2 – Burned	02 – Alcohol	16 – Household Goods	30 – Structure-Other Dwelling
3 – Counterfeited/Forged	03 – Automobiles	17 – Jewelry/Precious Metal	31 – Structure-Other Commercial
4 – Destroyed/Damaged/Vandalized	04 – Bicycles	18 – Livestock	32 – Structure-Indust/Manufact
5 – Recovered	05 – Buses	19 – Merchandise	33 – Structure-Public/Community
6 – Seized	06 – Clothes/Furs	20 – Money	34 – Structure-Storage
7 – Stolen, Etc.	07 – Computer HW/SW	21 – Negotiable Instruments	35 – Structure-Other
8 - Unknown	08 – Consumable Goods	22 – Non Negotiable Instruments	36 – Structure-Tools
	09 – Credit/Debit Cards	23 – Office Type Equip	37 – Trucks
	10 – Drugs/Narcotics	24 – Other Motor Vehicles	38 – Vehicle Parts/Accessories
	11 – Drug/Narcotic Equip.	25 – Purses/Handbags/Wallets	39 – Watercraft
	12 – Farm Equipment	26 – Radios/TVs/VCRs	77 – Other
	13 – Firearms	27 – Recordings (Audio/Visual)	88 – Pending Inventory
	14 – Gambling Equip	28 – Recreational Vehicles	99 – Special Category/UCR

Victim Vehicle

Year:	Make:	Model:	Color:	License Plate#:	State:	Reg.Year:
VIN:		Vessel Name:		Comments:		
<p>Body Style:</p> <div> <input type="checkbox"/> - Airplane <input type="checkbox"/> - Automobile & Trailer <input type="checkbox"/> - Cross Country Bus <input type="checkbox"/> - Other <input type="checkbox"/> - Snowmobile <input type="checkbox"/> - Truck/Trailer </div> <div> <input type="checkbox"/> - ATV <input type="checkbox"/> - Boat <input type="checkbox"/> - Motorcycle <input type="checkbox"/> - Pickup Truck <input type="checkbox"/> - Tractor Trailer <input type="checkbox"/> - Van </div> <div> <input type="checkbox"/> - Automobile <input type="checkbox"/> - Camper/RV <input type="checkbox"/> - Motorscooter/Moped <input type="checkbox"/> - School Bus <input type="checkbox"/> - Truck (Single Unit) </div>						

ARPA

Value Of Archaeological Resource:	Value Of Artifacts Seized:	Cost Of Restoration/Repair:	Amount Given In Rewards:
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Ranger

Reporting Officer's Name:		Supervisor's Name:	
Reporting Officer's Signature:	Date:	Supervisor's Signature:	Date:

	SEARCH & RESCUE SHEET				FORM 10-343 Version 06.18.93			
	Incident Number:			Incident Date:		Month:	Day:	Year:
	Account Number:			SAR #		Park		
	SAR INCIDENT SUPPLEMENTAL REPORT – INCIDENT SUMMARY							
	Victim Activity: Click Here For Options							
	Number Of Victims:							
	Number Of Injured/Ill:							
	# Of Fatalities:							
	# Of Saves:							
	Define “save” as being when a life would have been lost without positive intervention by NPS							
	TIME/COST SUMMARY							
	NPS Programmed Hours: Cost: \$							
NPS Unprogrammed Hours: Cost: \$								
Non-NPS Hours: Cost: \$								
TOTAL HOURS: TOTAL COST: \$								
AIRCRAFT SUMMARY								
Military Fixed Wing Hours: Cost: \$								
Military Rotary Hours: Cost: \$								
Non-Military Fixed Wing Hours: Cost: \$								
Non-Military Rotary Hours: Cost: \$								
TOTAL AIRCRAFT HOURS: TOTAL COST: \$								
Prepared By:				Date:				
Signature:								